

THE
SOUTHERN AGRICULTURIST.

SEPTEMBER, 1837.

PART I.

ORIGINAL COMMUNICATIONS.

Methods of Reviving Worn-out Lands.

Augusta, Georgia, August, 1837.

Mr. Editor,—I have just returned from a ride into the interior of this State, and have seen many methods of culture, which, to me, were novelties. Nothing, however, pleased me more than the growth of cotton in some fields, which, I was told, had been planted for twenty years. These Georgians have a dash of energy, that has ever hurried them to the front, in the march of improvement. Would you believe it; a field of cotton, that had been exhausted by the workings of twenty years, exhibited the promise of not less than one thousand weight of seed cotton to the acre. How? you will ask. Tell the where-withal? The wherefore? Nothing abstruse, Mr. Editor. No metaphysics in it. No jargon of the words alkalis and acids—nitrogen and oxygen—carbon and bones! Nothing of the kind: it is only this,—What was taken out of the soil is put back into it. The Georgians, I understand, replenish their exhausted fields in this way. Rye is planted broad-cast early in the fall; allowed to grow until pea-season, and then the whole is planted in peas broad-cast: when the peas ripen, if the crop be abundant, you may pick them, and after this done, turn the whole under with the plough. If the rye come to maturity before you are ready to plant peas, you may top the grain; or

top in the milk if you have time. If the land be very poor, this plan is usually adopted two successive seasons, and then it will afford an abundant crop of any thing. The appearance of the soil is now changed : it acquires a vegetable mould, not to be exhausted for many years. You may readily conclude what the effect will be upon the soil by turning under, first, a growth of rye, and then a growth of pea-vines. Nothing, to my own knowledge, is more renovating to land than pea-vines. They are friable, if I may be allowed to use the word, and incorporate immediately with the earth, and thus give, from this combination, a direct impulse to plants, without firing them, or obstructing the motion, or spreading of their roots. I am told that the crop of peas will, of itself, pay for the seeds used, and the price of labor : so that the improvement of the soil is so much gained.

Writing of replenishing soils, puts me in mind of what a very successful planter, in Edgefield District, is in the habit of doing every year. He plants about one hundred acres of rye, oats, or wheat, in the proper season ; gathers them in, and stacks them in the field : when he has laid by his crop, or whenever he can spare time, he gathers the grain in this manner :—He sews pieces of cotton bagging together—spreads it out as a carpet—places the rye, oats, or, wheat on the same, and makes the little boys of the plantation ride horses upon it, until all, or nearly all, of the grain is detached from the stubble. He then gathers the seed, and stacks the stubble in every part of the field. Not only his *own cattle*, but *his neighbors'*, are now let in, which trample the soil as they munch and scatter the stubble in every direction. In February, the field is broken up with the plough, and cotton or corn planted. This planter always makes fine crops, and sells many hundred bushels of small grain every year. A better plan of obtaining the grain might be suggested. The sheaf might be deprived of its grain by beating it on a rail, as is done in some parts of the West, and in Europe. By pursuing this course, this planter, who originally purchased a large tract of land, says, he has cleared very few acres, and has made abundant crops from his old fields, which were thrown out, on account of their sterility. We should take the hint, Mr. Editor, and do likewise. Let us not be running to the West, when, by a

little industry, we may improve our soils. Every citizen is wanted at home : we shall have need of them shortly.

Yours,

P. S. I had almost forgot to mention how some of the planters of North-Carolina replenish their corn-lands. Early in the fall they cover their fields with leaves or trash, and turn them under with the double horse-dragon or the crow-bar ; oats is then planted, rather late in the season, with the rake or harrow, broad-cast, for a crop, or turned under for a pea-crop, which is abundant. Peas riot in vegetable mould, or vegetable matter partially decayed. This I have seen ; for the most abundant crop I ever gathered, was when I manured my corn with leaves ; the corn was "very sorry," while the peas were vigorous. The reason was this : the leaves did not decompose in time to benefit the corn, while later in the season the peas had the benefit of them. The ploughing of the leaves should be deep, and they should be effectually covered to plant oats or rye with any hope of success ; but the peas may be planted at all events, and the same remark could be made of wheat, since new ground is said by some to yield good wheat crops. When the land is thus replenished, the North-Carolinians rarely, if ever, plant corn the first year : the plant most generally fires if they do.

Certain Crops of Fodder.

Mr. Editor,—On looking over your highly valuable paper, a year or two since, I read an article on planting corn "broad-cast," for a fodder crop, and forthwith tried the experiment ; the results of which were highly important. I am now satisfied, as your correspondent suggested, that an acre well manured, planted in corn broad-cast, will yield three thousand weight of fodder ; and that this crop, in the long run, will be superior to twice the quantity gathered in the usual way. For it is a certain crop, in as much as it can be gathered at any time, or when, from *appearances*, the weather will promise "a curing" of it. It may be cut young, middling, or matured, just as it suits the convenience, pleasure, or

prospects of the planter. It may be then estimated a certain crop, as far as human calculation can go. See, for instance, the situation of many, if not of all the lower-country planters on the sea-board this year. During the drought preceding the late desolating storms, could they not have saved fodder gathered in the way we have mentioned? What are their prospects now? They have left, out of a fruitful anticipation, the mere shreds of blades, not worth the labor of picking.

Since trying the above experiment, I have stumbled on a grain, even more valuable than corn in the quantity of its crop of fodder. I allude to Millet. It is a plant, the blades of which are, in texture and nutriment, between grass and corn fodder. It affords a large crop of grain, which, in many parts of the world, is a considerable item of trade. But it is not with its grain, as a bread stuff, or food for poultry, or horses, that I would have any thing to do. I look at its growth—its deep green luxuriance, and ask, whether we could not plant it for a certain crop of fodder, either "broad-cast" or in the drill? It can be cut three times during the season, and as often "cured," and from all appearance will give us three times the quantity of blades gathered from corn planted in the same way,—if not in weight, certainly in the quantity of the masticating matter; for its stalks are cured, and can be as well eaten as its blades; not so with the corn-stalk, unless it be cured very young. Another superiority of millet over corn consists in the fact, that, from the delicacy of its stalks, they can be cured as quick as corn-blades. This I have tried. Now, the only objection to corn planted as stated, is, the time the stalks take to be cured. However, this objection does not at all impair the value of planting corn for fodder; I only contend, that, on this account, millet would be far preferable.

This plant is highly relished by horses, green or cured. I am acquainted with a gentleman, who assures me, that out of a small patch of it, in the city of Charleston, he manages to feed two horses during the summer, without giving them any other fodder, and his horses look well, with no ribs jutting through their skins, to offend the eyesight of a humane people, or water the tongues of our scavenger birds. I have planted some of its seed, Mr. Editor, and next year hope to have it in my power to give you a more full account of it. It is not a rare plant in this

State : a gentleman informs me, that he saw about forty acres of it planted nigh Charleston for a grain crop ; and should this article meet the eye of the owner of that plantation, or of any one acquainted with the subject, he would be conferring a great favor on many, by giving us the light of his experience. I should add, that, in curing millet for fodder, all of it should not be cut. A part of the field, and the richest, should be preserved, or left for seed.

C.

The Grape.

Mr. Editor,—Many express a desire to cultivate this delicious fruit, could they be sure of success. It is easy to cover an arbor, or an espalier, with a luxuriant vine, say they, but the fruit is the thing : we want to be assured it will be good, and repay our trouble and expense. Such a desire is very natural ; but if no experiments are made they must be content to forego the enjoyment of the arbor and its produce. Every garden of moderate area, should have a few vines for family use, and the gratification of such friends as cannot afford them space. Every city, town, and village, can produce the grape, in very considerable quantities ; and if the quality is not good, it will be the fault of the cultivator. The first requisite is a good root, or good cuttings, and these may be obtained at little or no expense. I think roots preferable to cuttings,—the pith in the end of the latter, being exposed to the heat of the sun, and every change in the atmosphere, the health of the vine is apt to suffer, and the fruit deteriorate. This is one of the reasons why it is sometimes complained, that Mr. Such-an-one's cuttings do not produce as good fruit as the parent vines, and the unlucky wight is straightway charged with deception, as if disappointment might not result from other causes. Cuttings from the same vine, and taken at the same time, will produce fruit of different qualities ; that depending on care, soil and location. Roots, it is thought, cannot be had without much trouble, and perhaps great expense ; but this is quite a mistake : and I will put your readers in the way of procuring the best of roots, at no expense or trouble other than the cost of seeding, or as many raisins as they want seeds.

Some may know the grape will grow from the raisin, but I believe *very few* do. Not having tried the experiment, I cannot speak with certainty, but I am of opinion that the fresh white Malaga grape also, will grow from the seed. I mean those packed up with saw-dust in jars. They may not, as they are much more liable to rot than raisins; being uncured, they are much more moist, and the seed may not germinate. I think, however, the seed will prove sound in all plump, perfect grapes. Fruit of the growing crop will be in market early in the fall; and I intend to supply myself with the seed as early as possible; and recommend to all disposed to experiment upon this suggestion, to do the same. Separate the pulp very carefully from the seed, that the germ may not be injured. dry them in the sun, and that they may not be approached by insects, cork them up in a phial. The ordinary process of eating the grape or raisin is the best for cleansing the seeds, taking care to avoid the teeth, and not to pass the seed too rudely against the roof of the mouth. The germ end is very tender in both, but much more so in the seed of the uncured grape. Raisin-seed will require very little sun-drying, and both may be injured by too much. In this way I feel confident, roots may be obtained of the white Malaga grape, and of every variety of raisin imported into this country, except the Sultana, which is an anomalous fruit, if it does in fact carry no seed. I suspect, however, the seed is very adroitly abstracted. With reference to procuring roots from the seed of raisins, I can speak confidently, having a few years ago tried the experiment merely to satisfy my curiosity. I selected two or three of the finest looking raisins of the kind known as Muscatel Royal, and perfectly free from the appearance of being candied, or sugared,—clean, pulpy, and well-cured. I put the seed in the end of a bed, in the garden, and it came up finely. The location had a northern aspect, and was therefore unfavorable to the plant; the buildings, too, completely shaded it after ten o'clock; yet it flourished and grew to about the height of seven or eight inches, when, unfortunately, my horse got into the garden, and destroyed it. My curiosity was gratified most fully, and had I owned the premises, they should now boast an arbor covered with the best Royal Muscatels. I trust the day is not distant, when we may talk of our “vine clad hills and vineyards,” and discuss the merits

of native wine as generally as we now do the mode and advantages of planting this, that, and the other varieties of cotton. Your Up Country correspondent was in great error when he trained but one runner, if he preferred the fruit to the shade of the vine. Whether the vine be trained upon an arbor or espalier, the leader should be frequently clipped, and a few lateral branches encouraged: when these have attained a certain length, clip their leaders, and turn and train their branches. In every case, the branches retained should be those nearest the parent root. This plan will give you a vine with a sturdy trunk and vigorous branches; while, permitted to run on, and on, nobody knows where, you will have an attenuated rope-like vine, which will be too feeble to sustain branches where you wish to encourage them, and not so capable of resisting the effects of drought, heat and cold. If the vine is cultivated chiefly for ornament or shade, I would train numerous lateral branches, and destroy most of the fruit buds, but if for the fruit, I would increase the number of branches slowly, keep all the fruit, and remove all useless foliage. The fruit and leaves will increase in size, and the sun and air having free access to the fruit and vine, the whole will be more healthy. If the cultivator is willing to dispense with the shade, let him set up one or more rows of posts, ten feet apart, and as many high, with three slats running from post to post. Cedar, juniper, or cypress posts would be best and most durable, and the upper slat should lay flat on the tops of the posts, so as to preserve them from rot. Place the lower slat four feet from the ground, and to support the young branches pins may be driven into the posts. When the runners reach the upper slat, train them upon it, and let them interweave and pass each other. In this way, a vine of any length desired, can be trained and supported.

C. D.

The Sun-Flower.

Barnwell, July 24, 1837.

Mr. Editor,—The Sun Flower is a plant of much greater value than is generally known. Instead of a few being permitted to grace a parterre, and considered only as a gaudy flower, experience warrants my saying it

should be cultivated by every planter and farmer, as part of his provision crop. It can be turned to profitable account on all our plantations; for certain purposes it is more valuable than any other grain known to us; in as much as it can be made to yield more to the acre in exhausted soils, with little labor, and with greater prospect of success.

It's seed are wholesome and nutritious food for poultry, cattle and hogs, and very much relished by them.

From the seed an oil is obtained, with great facility, as delicate, it is believed, as that of olives.

They are also pectoral. A tea made of them, is quite as effective as flax seed, or any other, in catarrhal affections. On one occasion, this tea, sweetened with honey, was of so much more service to me than the prescriptions of my physician, that I attributed my early restoration to health to its agency alone. Certainly, a favorable change did not occur till I used this tea, which I did upon the recommendation of a citizen, of one of the upper counties of North-Carolina.

Its leaves and stalk, in the green state, are preferred by cattle to any other provender. I have thrown green grass and fodder in one heap, and sun-flower leaves in another, to try the cattle, and they have ever commenced eating the latter first: this I have tried often with the same result. The whole plant, cut up, in the green state, and boiled with cotton-seed, or a little meal, affords a delicious food for cattle and hogs. To be convinced of this, let one taste the bruised leaves or stalk of the plant; he will find its flavor aromatic like that of the parsnip, with more sweetness.

This plant is the safest provision crop we can grow to subsist stock during the summer. I have cured the leaves, and understand they are packed with hay in some parts of Europe. It may be well, however, to observe, that when the lower leaves of the plant are stripped, it shoots and takes a second growth, and yields less grain; this remark is founded on one experiment only, during a dry summer: I therefore cannot rely upon its accuracy. If it be correct, under all circumstances I feel satisfied, what one loses in grain by stripping, he gains in foliage. My way of cultivating the sun-flower is this:—at the ends of each potato-row, I plant two stalks, in all four to the row, and they are worked with the potatoes; in the

same way are they planted in the slip fields, *as soon as the beds are prepared*. I also plant them in the garden and the turnip-patch, and in short wherever their shade will not injure an undergrowth, and wherever the working of the crop in which they are planted will be sufficient to mature them. In this manner, all is on the side of profit; the only labor is putting the seed in the ground, and gathering the crop. Besides this method, I plant as many acres as I require, in the check as far apart as I do corn, taking care to manure them. The best plan would be to plant in the boundary checks of the field, for they would arrest the attention of the squirrels and birds, which are fonder of the seed than of corn, and thus save the corn; any one who has beheld the wood-pecker in our parts, sapping the life of the milk corn, will at once feel the importance of this suggestion. I have, lastly, to remark, when the sun-flower is planted in the check, it will not debar the planting of peas, as we do up here; it will thrive as well, and the peas will cling to them and flourish as much as in a corn-field, or new ground. B.

N. B. A tea infinitely better than flax, is that made of cotton-seed: let a double handful or less be mashed, and thrown into one or two quarts of water, boiled, sweetened, and given to the patient through the day.

Nursery of Tropical Plants in Florida.

TO THE PUBLISHER OF THE SOUTHERN AGRICULTURIST.

Planter's Hotel, Charleston, S.C., 19th August, 1837. 9 A.M.

Dear Sir,—As the steamer Georgia, for Norfolk, appears to be still detained by the weather, I avail myself of her delay, to address a few lines to you, since your Editor continues to be absent. In the preface to my letter of the 30th June, from Key West, published in the last number of your periodical, Mr. Carroll appears to infer, that I had located, or should locate, my temporary nursery at Key West. It is true that my impressions *then* were in favor of selecting a spot on that, or *SOME OTHER*, islet, for a *preparatory* garden, but after seventeen days' further observation and inquiry, I became convinced that

the Island of Bones would not answer my purposes. You are aware that its sub-soil is a solid limestone rock, and its soil a mere calcareous powder, tinged with vegetable mould; and that hence the latter becomes exhausted by two or three years' culture or exposure to the sun: but to me the greatest objections were, the facts of the extreme dryness of the atmosphere, and of the earth, without the ability of supplying by artificial irrigation, the want of sufficient natural watering from the clouds. Could I have obtained an adequate quantity of suitable water by digging wells, and by machinery to elevate and distribute it, I should, likely, have decided to begin the preparatory nursery at Key West. Being, however, informed, that at *Lignum Vitæ*, Matacumba, &c., islands adjoining Indian Key, both depth of soil and pits of water could be found, I reached the latter on the 20th July. During the subsequent fortnight I visited the reported deep soils of *Lignum Vitæ*, and the eulogised water-pits of Lower Matacumba, but neither afforded sufficient requisites for even a preparatory garden. Charles Howe, Esq., Inspector and Postmaster at Indian Key, very opportunely afforded an intermediate resource for preserving my most valuable seeds, by consenting to plant them in boxes of earth, which could be transported to the main land of the peninsula. Half-barrels of vegetable soil were immediately brought from Lower Matacumba, and I had the satisfaction to aid in the planting of many of them previous to my departure, on the 5th instant, in the mail schooner *Hope*, for this port. If what every body says be true, then Mr. Howe must be one of the very best men along the whole Florida reef. At all events I have left with him nearly all my equipage, and all my materials to promote the successful establishment of a domesticating nursery of tropical plants in tropical Florida. During the first nine months of 1833, through all the additional obstacles interposed by the destructive cholera of Havana, New Orleans, and Campeche, I forwarded to Southern Florida many species of valuable vegetables, which yield farinaceous roots, delicious fruits, healthy beverages, precious oils, permanent colours, grateful odours, narcotic leaves, capsular fibres, cortical fibres, and *foliaceous fibres*. How many may have been preserved by the agency of J. Dubose, or others, near Cape Florida, it is almost impossible to learn with certainty, at present, or

1837.]

On the Planting of Cotton.

461

as long as the Seminoles have possession of the southern coast. By the by, I found a copy of my circular to the Intelligent Friends of the Union, written five years ago, and if it has not been published in any previous number of your periodical, or if you think it worth republishing now, it is at your service, for your next or September number.* For your October number, I will furnish you in time, several sheets on my favorite topic of Foliaceous fibres.

Very resp'fully, your ob'dt serv't,

H. PERRINE.

On the Planting of Cotton.

Antauga County, Ala.

Mr. Editor.—I am highly pleased with your valuable periodical, the Southern Agriculturist, and I hope to obtain through its columns, all the benefit of modern improvement. I have no donbt, sir, but this is the era of discovery and improvement in agriculture, as well as science and the mechanic arts. I do most sincerely hope that science will soon be brought to bear generally upon practical agriculture, then we may expect as rapid and profitable improvement in this art, as has ever been made in any other.

I am a young and inexperienced planter. I write to make a few inquiries for information, from your correspondents.

In your March number, a writer from St. Luke's Parish, recommends salt as a manure for cotton; will the author please inform me what was the quality of his land, as I suppose that much depends on the kind of land, in the selection and application of manure. The writer alludes to a previous publication of your own on this subject; this did not reach me; will you be so good as to republish the article with any other information on that subject. A writer, last winter, I think, described his potato house, to be in the form of a hip-roof house, but did not state what was the size and dimension. I will thank him for another and more minute description.

* See page 497 of this number.

I should be glad to know whether any of your subscribers have ever tried the method of planting cotton in checks, so as to hoe from it both ways, and what were the reasons for approval or disapproval?

Information on the subject of the distance that cotton should have in the row and drill, would be very thankfully received; if the boughs, should be permitted to interlock at all, how early in the season.

ANTAUGA CO.

Remarks by the Editor.

We call attention to the above queries. The correspondents alluded to, will do us a favor to give the explanations our friend requires. To that part which relates to cotton in the check, and the interlocking of the branches, we would earnestly solicit the replies of the cultivators of "shorts." Indeed, it is time for our middle and up-country planters to present to the public, the results of their experience in the culture of a staple, which, though not so costly as our fine cottons, yet for its quantity may be considered the chief article of our commerce. In no two districts is it cultivated the same way—the ways are as multiplied, as neighborhoods. Each has his system—some "plant flush," that is, without beds—others bed—some use the plough only—others the hoe—some make their beds large—others small. Now, all of these plans cannot be right—a variation of soils may justify the difference; but in one circumstance, we have assurance to believe, that whether the soil be flat or high, large beds are best—in wet weather, the deep alley lets off the water; in dry weather, the beds retain the moisture from dews or otherwise, much longer. This we can vouch for in two well defined cases. Two gentlemen who emigrated from the lower country, to different parts of the State, at the same time and during similar seasons, adopted the plan of cultivating cotton on large beds—one of them tells us of his, while we have heard of the success of the other. We do not know to what extent our planters adopt the check system. In the middle districts, it is common to lay off with the plough three feet one way, and two and a half the other—leaving two stalks in each check, and the moment the stocks are about to interlock, the crop is laid aside, not, how-

ever, before the Freeborn plough has been used to throw a bed to the cotton. The hoe is rarely if ever used—all is accomplished with the plough. The interlocking of the branches they say keeps down the grass. We have seen many fields planted in check, and feel satisfied that it will become the favorite system of our short cotton planters, when they shall be compelled to resort to manure. On very poor land, we know a farmer, who never fails to realize less than five bales to the hand. He makes up by the quantity of land planted, what others do by richness of soil. With each plough he attends thirty acres of cotton, and the yield may be easily imagined. What would be the result we should like to know, if the check was manured before the seed were dropped, or if the land were rich. We think the yield would be greater. Indeed, so confirmed are we of this, from the representation of a practical planter, that we do not hesitate to believe all our abandoned lands in the lower country and elsewhere in the State, will after a while, be planted with short cotton after this system. The planter to whom we refer, has this season tried the experiment and promises us the result. He says, 1st, that this system will be adopted, when planters of short cotton shall resort to manure, otherwise manuring will scarcely pay for the culture of it. 2d, Not more than one-fourth of the manure is required "in check," which is strewed on the list. 3d, The manure between the intervals of the plants on beds is gained; and concentrated for their subsistence in the check. 4th, The plant has more air and more sun. 5th, Five times more can be planted this way than with the hoe. 6th. The quantity planted, he says, will more than compensate the advantages of large beds, attended by the hoe and cultivator.

In some future number, we will endeavor to satisfy our correspondent on the topic of salt as a manure. We would republish our editorial, but have to say, it would violate a rule prescribed for ourself. We hope, however, in a short time, to publish the substance of it with additional remarks, and in the mean time, should it be in our power, will transmit our correspondent the number of January last, which contains the article alluded to.

Monticello Planters' Society.

Mr. Editor,—By vote of the Society, of which I am Secretary, and of which you have here the proceedings, I send you a copy of my minutes. A good deal may appear to you as unworthy of notice, yet, with our constitution and some previous resolutions, it would all perhaps be useful for publication; as, for instance, a resolution has been passed, requesting correspondence, from all planters, with each Chairman of the committees, on their respective subjects: besides, the publication of this procedure, may excite an interest in the agricultural world, no other way to be effected.

We, at least, desire you to publish our awards for the anniversary meeting in 1838, as we shall, most assuredly, have an exhibition of stock, that, we do much question whether, in quantity or quality, has at any time in Kentucky been surpassed.

I am, sir, with very great respect,

Your most obedient servt.,

DAVID ELKINS, *Secretary.*

Proceedings of the Monticello Planters' Society.

The meeting was called to order by the president, and the committee to whom was referred the compilation of the constitutions of the amalgamated societies, viz. the Regulating Society, and the Agricultural Society, presented the same, which was unanimously received, and after the signatures of the societies thereto, the anniversary orator, Col. B. F. Davis, was called upon to deliver the anniversary oration; after the conclusion of which, Major William K. Davis, was called on for his address. The thanks of the Society were tendered to these gentlemen on motion of Dr. Smith.

This being the proper time for the regular business of the Society, David Montgomery, Esq., moved that the Committee on Cotton be required to experiment minutely on topping cotton; "That each member of the committee, shall, in the same field, top one row 1st June, another, 15th June, another, 1st July, another, 15th July,

1837.] *Proceedings of the Monticello Society.* 459

another, 1st August, another, 15th August, and another 1st September, and observe minutely the product of each, together with a row not topped at all, and this continued for three years, with particular reference in their observations to seasons." After some remarks, doubting the practicability of topping cotton at all, and if admissible, subject to seasons subsequent to the topping, it was considered, that the motion would certainly secure this knowledge, and the motion was therefore adopted.

Moved, That the several committees on corn, peas, wheat, oats, rye and barley, be required in their reports to state the best seed and kind of each, the best mode of preparing the land, and the best cultivation thereof.—(Agreed to.)

Then it was *Moved*, That the respective committees on stock, in their reports, remark, whether *color* is an essential consideration in their value.—(Agreed to.)

Moved, by Col. B. F. Davis, That a committee of five be appointed by the president, whose province it shall be to petition the State Legislature, on the part and behalf of the society; that it be incorporated under the name and title of the Monticello Planters' Society, and further, to solicit the Legislature if possible, to render said society any or such encouragement, as they in their wisdom may deem proper.—(Motion carried.) The president appointed, Gen. Means, Col. B. Davis, W. J. Alston, Esq., Edward Means, and Burrel B. Cook, Esq.

On motion of Burrel B. Cook, Esq., *Resolved*, That this society recommend the formation of an Agricultural Society in every regiment of the district, and respectfully suggest to our fellow-citizens, to consider and favor the project.

Also be it *Resolved*, That this society will most cheerfully correspond with any society formed, (or about to be formed) and consult with them on the general interest of agriculture, and for concert of action.

The president then, by order of the society, under the constitution, went into the appointment of the several committees, which are as follows:

1. *On Manures*.—Major William K. Davis, Rev. Joseph Holmes, Wm. J. Alston, Esq., and Isaac Means.
2. *On Cotton*.—Burrel B. Cook, Esq., Rev. Wm. Holmes, Major Elliot Elkins, Richard Halms, William A. Martin, Edward Means, Charles Thompson, Richard C. Woodward, and George Shedd.
3. *On Corn*.—Col. Jonathan Davis, J. Alston, Nathan Cook, John Ashford, Wm. Bell, Charles Ralb and Thomas Ashford.

4. *On Wheat.*—Jacob Feaster, Esq., Robert F. Coleman, Jonathan Cole and Jesseman Ederington.

5. *On Oats.*—Charles Bell, Esq., John Kernaham, Wm. Watt, sen., John P. Hutchison, sen., John Rabb and H. Bell.

6. *On Rye.*—Major Thomas Watt, John Watt, J. Glenn, T. W. Rawls and Daniel D. Findley.

7. *On Barley.*—Col. B. F. Davis, Thomas Owen, Glazier Rabb and N. Cook.

8. *On Peas.*—H. Arthur Glenn, Elijah Willingham, Jonathan Robertson, John James and Silas W. Ruff, Esq.

9. *On Grapes.*—J. W. Alston, Esq., William T. Montgomery, G. W. Sanders and Isaac Morris.

10. *On Silk.*—Dr. G. P. Pearson, Dr. John A. Smith and Robert M'Cullough.

11. *On Fencing.*—James W. Nelson, Esq., John P. Milling, Capt. N. B. Holly, James B. Rabb, William B. Owens, Thomas A. Crumpton and Jonathan Harrison.

12. *On Foreign and Domestic Seeds.*—Gen. Means, J. G. Oneale, William Elkins, Miles Holmes, C. Cowles and Dr. E. Jennings.

13. *On Farming Utensils.*—Adna Johnston, Major John Thompson, Burr Harrison, Col. H. Stevenson, Elisha Morris, Wm. Holly and James Parr.

14. *On Potatoes.*—Charles Rabb, William Robison, Ezekiel Hoy, John Byerly and Thomas D. Rabb.

15. *On Horses and Mules.*—John M. Robertson, Nathaniel Holly, Thomas Rabb, sen., L. Chappel, J. Alston and David Elkins,

16. *On Cattle.*—Major Charles Montgomery, W. M. Montgomery, Daniel B. Kirkland and Dr. J. B. Davis.

17. *On Hogs.*—Benj. Laiken, Esq., Steuart Mitchel, Chesley Mathys, Daniel Hughey, Silas W. Lyles and Thomas Blair.

18. *On Sheep.*—Robert Hawthorn, Col. B. F. Davis, George James, Wm. Owens, jun., Wm. Osburne and John Rabb, sen.

19. *On Ways and Means.*—President, J. B. Davis, Treasurer, Wm. Alston, Secretary, David Elkins, Esq., Dr. J. A. Smith, C. S.

20. *Vigilant Committee of Lower Neighborhood.*—Silas W. Ruff, Jonathan Robison, B. B. Cook, Major Watt and L. Chappel.

Middle Neighborhood.—Adna Johnston, Daniel Hughey, Wm. Alston, Wm. Holly, Wm. Elkin, Elliot Elkin, J. W. Nelson, R. Halm, Burr Harrison, B. F. Davis.

Upper Neighborhood.—Capt. Jonathan Coleman, R. Coleman, E. Means, Isaac Means, Jacob Feaster, Wm. Osburne, Silas W. Lyles and Jesse Ederington.

Moved, that the society change its times of meeting, one meeting the first Wednesday in March, and the anniversary meeting to be on the first Wednesday in October.

On motion, the committees attended their duties and made the awards.

On motion, an appropriation of twenty dollars, was made for attorney's fees. Also twenty dollars for Vigilant Committee.

On motion, went into an election for Anniversary Orator for 1838, and General Means was declared elected.

On motion, the Society then proceeded to the election of Treasurer, occasioned by the resignation of David Montgomery; and Wm. J. Alston, Esq. was elected.

Then moved, that as some dissatisfaction had existed, from misunderstandings as to awards, and as there was expected, from the preparations making, a very extensive competition for awards, that said awards be now decided for our next anniversary, in October, 1838, and published, forthwith; whereupon, the following awards were agreed on:—

1.	For the best Stallion, thorough bred, three years past,....	Cup \$20
2.	For the best male, thorough bred Suckling,.....	" 10
3.	For the best Filly, thorough bred, three years old past,.....	" 20
4.	For the best Filly, thorough bred, Suckling,.....	" 10
5.	For the best common blooded Stallion, three years past,....	" 15
6.	For the best common blooded Suckling,.....	" 7.50
7.	For the best common blooded Mare, three years past,.....	" 15
8.	For the best common blooded Mare Suckling,.....	" 7.50
9.	For the best Bull, three years old,.....	" 10
10.	For the best Bull Suckling,.....	" 5
11.	For the best Heifer, three years old,.....	" 10
12.	For the best Heifer Suckling,	" 5
13.	For the best Boar, three years old,.....	" 5
14.	For the best Boar, six months old,.....	" 2.50
15.	For the best Sow, three years old,	" 5
16.	For the best Sow, six months old,	" 2.50
17.	For the best Ram, one year old,	" 5
18.	For Member making the most Cotton on an acre of reclaimed upland,	" 5
19.	For Member making most Corn on an acre of ditto,.....	" 5
20.	For " " Wheat "	" 2.50
21.	For " " Oats "	" 2.50
22.	For " " Rye "	" 2.50
23.	For " " Barley "	" 2.50
24.	For " " best improvement in any Farming Utensil "	" 5
25.	For two gallons finest Domestic Wine,.....	" 5

The Society then adjourned, and sat down to a sumptuous dinner, with a very large assemblage,—all harmony and kind feeling; after which the company were much interested by the exhibition of stock, horse colts, mule colts, jack and jennet colts, &c., not quite so fine as to be brought in competition with those contending for awards, but certainly fine colts. Meeting dispersed.

Remarks by the Editor.

We give place, with more than usual pleasure to the above minutes. They indicate the improvement of agriculture in a district, whose soil and climate hold out attractions to the farmer of infinite value. The constitu-

tion of this Society must present an excellent model, and we cordially accept of Mr. Elkins' polite offer to transmit us a copy for publication. We entreat our friends in that part of the country to give us their co-operation, not by their subscription money only, but with their pens. Our columns are open to them all. Nothing could afford us higher gratification, than the publication of well written articles from every part of the State, so as to develop its resources, and the various improvements in the culture of its staples. Agriculture is emphatically a practical science, derived from experiment and observation, and without *facts* can be estimated no more than an imaginative pursuit. It requires as much observation and general learning as the study of medicine; nay more observation; for as plants cannot describe their feelings, or point out the precise seat of pain, we are left solely in our treatment of their diseases, to inferences drawn from certain appearances under the peculiar circumstances of climate, soil and season.

Banking Potatoes, or Slips.

Orangeburg, July, 1837.

Mr. Editor,—In the middle country, planters bank their potatoes or slips, with great success. After they are gathered, they are sunned one or two days; care being taken not to bruise them. They are then piled on a foundation of pine-trash, and covered with cotton-seed. The tops of the banks are left open for a few days, if the weather be dry, and if not, the tops are occasionally opened, and then covered again. Slips banked in this way, keep better than any other I have seen. It is now generally believed, that the tops of the banks should be left open only a few days, if the potatoes have at first been well sunned. Some planters in my neighborhood make ditches around the spot where they bank their slips, to let off water, or dampness in the soil, while others make 'blind,' or 'French ditches,' under the spot.

With respect, yours,

R.

High-land Rice.

Richland, July, 1837.

Mr. Editor,—Situated, as many of us are, very far from the river, we are compelled often to pinch our wits, to invent substitutes for the better living you can *buy* in Charleston. River rice we can only hang up to smell, as the Irish family is said to have done a bit of bacon. We, therefore, plant it on high land, precisely as we do cotton, and work it in the same way,—that is, we plant it in drills on beds two and a half feet apart. This, worked well, generally affords enough for table use, and seed. Some of my neighbors plant it nigh the stalks of corn; others plant two grains nigh each hill of cotton. This much, however, is certain, that any one can make rice enough on the high lands to supply his table, and save seed.

M.

Cooter Catching.

Mr. Editor,—Monsieur Éude would have devoted a chapter on the cooter, had he ever partaken of the rich and delicious soup we Southrons make of it. As my friend, Dick Noodle, once observed, while he devoured some of this exquisite soup, ‘gads, sir, if the Spartan black broth was like this, those hardy soldiers were to be envied.’ I have no love for ‘the kitchen cabinet,’ and therefore cannot inform you how this soup is cooked. I can only say, that, ‘in our parts’ it is ‘a nice thing,’ and that we amuse ourselves catching ‘the crittur,’ in various ways, a description of which might please our bon vivants to read.

1st. They are sometimes taken on the high land, in the spring, as they come out of the water to lay their eggs.

2d. We tar a log, on which they usually sun themselves, placing there meat as a bait, and the four legged things will stick as fast as ‘bru’ rabbit did to the ‘tar man,’ so often told us in childhood by our old nurses.

3d. A large square net, with a long handle, is concealed under old trees declining in the water, under that part of the tree just out of the water: the cooters are allowed to

crawl up in numbers, and when they have done so, we suddenly make our appearance, and they immediately slide off into the net, which is then lifted and brought to the shore. This is decidedly the best way of taking them.

4th. An amusing way of taking them is to shoot them with the gun or rifle. When hit with duck-shot, they become so confounded, that they cling to the tree, so that you may walk up and take them. With the rifle, the art consists in not hitting them in a vital part; for if they are, the convulsions of death cause them to let go their hold, and they fall into the water and sink.

Our negroes on the plantations are very fond of cooter broth, or fry, and by explaining the above methods of catching them, they could daily supply themselves with this delightful food.

Pride of India.

Mr. Editor,—Would it not be worth the while of those planters who have cleared large tracts of land, by cutting wood for market, to set out *Pride of India* trees. Fire-wood is becoming every day scarcer, and therefore higher in price; and in ten years, these trees would grow to a size suitable for any purpose.

I need not enumerate the properties of these trees. Your correspondents have already done ample justice to the subject. I will only add that the texture of this wood is fine, admitting of a high polish for tables, chairs, or the tasty work of a house. The fall of leaves and berries, as a manure, would pay for the expense of cultivating the tree. And the leaves may be cured, and mixed with hay or fodder, so as to improve the health of horses. Hay is so mixed and packed, in many parts of the world. However, as an item of fire-wood no tree can compare with it. All our waste lands on the water-courses should be planted with them. This living for one's self, or immediate gain, is not the impulse which becomes a high minded people. We should have our eye to posterity. He who cultivates the soil, without regarding the future comfort of his children, will waste the means God hath placed in his hands. Where would be the British navy, had that gallant peo-

ple been influenced by narrow considerations of immediate gain? One of the most eminent of scholars did not impair his fame, by directing public attention to the importance of planting live-oak trees, from which nursery Old England now draws her strength.

The time is not far distant, when fire-wood will, as it is even now, become, an article above the price of the poor; *when we will have to depend on foreign markets for our fuel!* Think of this, and say, whether we ought not plant trees to supply our consumption? We have no mines of coal,—no substitute! If not patriotic motives, the anticipation of profit should prompt us, at once, to take the matter in hand, and prepare for the emergency.

CHARLESTON.

Eggs and Turkeys.

Mr. Editor,—It is a common error, that eggs brought from a distance, on board of vessels, or by horse conveyance, will never hatch out. It may be well to know, this is truly an error. A recent case proves, that eggs will hatch when brought one hundred miles on the railroad. Out of twenty-four eggs thus brought, but one failed bringing forth a chick. The gentleman who communicated this fact, has devoted much attention to poultry, and we hope he will occasionally inform us, how he manages to raise so many. His yard teems with all kinds of fowl.

Chickens we all know how to raise, but as few of us can rear 'a good chance of turkeys,' I will tell what I know. Next to chickens, of all poultry, they are the easiest raised. When the eggs hatch out, let the hen and chicks be confined in a garden, or any other place where the young ones can sun themselves. Let them be fed with hominy for two or three days; then carry them to a rail-pen, in a rye, oats, or buck-wheat patch; confine the hen, and feed at least three times a day with hominy or small grain. The young ones will soon run about catching insects, and will come to the hen's call. The hen should be thus confined until the turkeys are about *half-grown*; they will range about, but never without the sound of the mother's call. By this plan, we do away with the necessity of having a turkey-minder. The

young ones are not so liable to injury from hawks or vermin as when they follow the hen in her rambles over the plantation, nor are they compelled, in keeping up with the hen, to fatigue themselves more than is good for health.

Great care must be taken, to keep water out of the pen; it should be ditched all round, so as to keep it dry; its foundation should be made higher, with dry sand, than the level around, and the top should be well covered; the ditches nigh the pen should be covered with boards, to keep the young ones from falling in. You may rely on this plan, Mr. Editor. I have seen out of eighty-seven turkeys, eighty-six raised,—one having been mashed by a horse.

Hawks.

Mr. Editor,—It is important to know, that the great enemy of hawks, eagles, &c. is the swallow. While travelling one summer through our State, my attention was arrested to divers calabashes, attached to branches of cypress poles, high in the air, which, for all the world, looked in the distance like the dingy shirts of jack-tars suspended to the yards of some 'tall admiral.' Upon inquiry I found that small holes were cut in these calabashes, and they were suspended in this fashion for swallow-houses, and was told they kept off hawks and eagles. I afterwards tried it, and can testify to the truth of the remedy.

P.

Next Month.

Mr. Editor,—October will be an important month to the planter. We are now harvesting and picking cotton; and will be then digging roots. More can be accomplished in that month than many imagine. Say our corn and fodder crops have failed, we should then be gathering grass, and paying the closest attention in putting up whatever roots we have, to feed our people and our stock. October we should call our catering month! Allow me then, sir, to say something on preserving roots.

1. BEETS.—To preserve them during winter, they should be put in a dry cellar, with dry sand between them, or, indeed, without sand or any thing between them. They may, if in large quantities, and not wanted until spring, be preserved out of doors thus :—Take them up three weeks before the hard frost is come : cut off their leaves ; let them lay two or three days upon straw, or boards, to dry in the sun ; then lay a little straw upon the ground, and in a fine dry day place ten bushels of beets (picking out all the cut or bruised ones) upon it, in a conical form. Put a little straw smoothly over the heap ; then cover the whole with six or eight inches of earth ; and place a green turf, shingle, or pine bark on the top, to prevent the earth from being washed, by rain, from the point, before the frost set in. The whole heap may freeze during the winter, but the frost will not injure the beets ; nor will it injure carrots, preserved in the same way. If you have more than ten bushels, make another heap, or other heaps ; for fear of *heating* before the frost comes. When that comes, all is safe till spring ; and it is the spring, that season of scarcity, for which we ought to provide. How many bushels of beets are flung about and wasted in the fall, the smallest of which would be a treat in the month of May ?

2. CARROTS.—They may be preserved in the same way. A cow will nearly double her milk, if taken from common pasture, and fed well on carrot greens or tops ; and they may, at this season, be cut off for that purpose. They will shoot a little again, before the time of taking the carrots up ; but that is of no consequence. These shoots can be cut off before the carrots be put away for winter.

3. PARSNIPS.—As to preserving them during winter, and for *spring use*, they stand all frost without injury, and even with benefit. So that, all you require is, to put up for winter as many as you want, during the hard frost ; and these may be put up as directed for beets. The greens of parsnips are as good for cow-feed as those of carrots ; but if the parsnips be to stand out in the ground all the winter, greens should not be cut off in the fall.

4. TURNIPS.—To preserve turnips during the winter, follow the same plan as with beets. The ruta-baga produces most excellent *greens* in the spring, and at a very early season. To draw this benefit from them, the best

way is, to leave a row or two in the ground, and when the winter is about to *set in*, cover them all over with straw or pine trash. Take these off when the winter breaks up, and you will have very early, and most excellent greens; and when you have done with the greens, the turnips are very good to eat.

5. POTATOS and SLIPS.—The method of preserving them, is well known to every planter, and therefore I shall say nothing.

6. GROUND NUTS.—When they are planted, chiefly for a provision crop, just before frost, let a furrow be run with the plough on either side of the row, throwing the dirt from it, then pulling up the vines, with as many ground-nuts as adhere to the roots; throw them down to dry: when this takes place, house them. Should you wish the nuts afterwards, pick them; and give the vines, &c. to horses, cattle, &c. The moment the vines, &c. are taken from the field, turn in the hogs, which will fatten in a short time.

7. PUMPKINS.—These may be kept the whole winter in this way: Let them be gathered before hard frost, housed, and covered with straw: they should be put up dry, and should be kept cool some time, say a week, before you cover them with straw.

8. WINTER WATER-MELONS.—This is a food, few of the Carolina planters know any thing of. In Georgia it is considered of great value, for cows, hogs, and even horses. They are planted as we do the common water-melon, and when ripe, gathered and piled in heaps, for winter use. The frost does not hurt them; and they can be heaped any where, without caring to protect them from rain or frost. Some planters in our State plant them every year.

PART II.

SELECTIONS.

Facts worthy of Consideration—Especially for Legislators.

[FROM THE CULTIVATOR.]

Five millions of agriculturists in Great Britain furnish subsistence for her population of sixteen to eighteen millions of people. Great Britain imports but a small amount of provisions.

Twelve millions of agriculturists in the United States *do not* furnish subsistence for a population of sixteen millions. We import bread stuffs, now, from almost every country of Europe.

Whence this mighty difference? It is not owing to the natural inferiority of our soil, nor to the inferiority of our laborers in physical strength and industry. In both these we claim to have the advantage of the old continent; but it is owing to the neglect of our legislators and statesmen, to patronize and aid this great primary brance of labor—it is for want of that aid which government and science give there, and which they do not give here. *There* we see established schools of agriculture, boards of agriculture. *Here* we see neither. *There* agricultural science constitutes a branch of instruction in the primary schools, and practical instruction is [not] dispensed in those of higher grades. *Here* our schools do not afford instruction in eather the science or practice. *There* large sums are disbursed from the public treasury, to make agricultural surveys, to publish standard works on husbandry, and to call forth genius and skill, by liberal rewards and distinctions. *Here* government expends nothing for these objects. *There* agricultural improvement is promoted from state policy. *Here* it is neglected, because it has no *quid pro quo*—nothing to offer to gratify the short-sighted cupidity of party. Our statesmen are so greedy for the sixpence that is close to their eye, that they do not see the dollar which beckons them from the distance. The landed proprietors of Europe generally possess intelligence and influence, which they effectually exert, in combined effort, to encrease the products of their estates. *Here* the proprietors are too often uninformed and spiritless, having no concert, and tamely submitting to the miserable pittance which their public servants may find leisure or inclination to dole out to them.

Thirty years ago, what was the state of our manufactures and mechanic arts compared to what they are at the present day? What art has remained stationary? Manipulation has given way to machinery—science has shed her effulgent light upon processes which

were before obscure, tedious and uncertain—and inventive genius, roused from its torpor by the spirit of improvement, has been actively at work, in perfecting the mechanic arts. Where is the man who, in any of these arts, follows, in his business, the practice of his father that is successful in his calling? All is changed—all is improved. And how fares it with agriculture? This primitive art, too, has felt the impulse of improvement, though yet in a partial degree. Some portions of her labors have been blessed with an abundant increase, while other portions, practising on the model of “our fathers,” remain at a fairful distance behind the age. In most parts of northern Europe improvement has progressed, and is progressing. English husbandry has been greatly improved, and Scotch husbandry still more so. France is in the progress of rapid improvement in her agriculture; and the agricultural schools of Fellenburg and Von Thaer are fast diffusing a knowledge of the science and of the best practices of husbandry over the wide-spread German empire. With us, while some districts, and many individuals, have made creditable advances in agricultural improvement, the mass of our farmers, we regret to say, are just where they were *thirty years ago*, apparently unconscious, that while they have remained stationary, the world about them has been continually advancing in intelligence and improvement. Much has been done, and more remains to be done, to improve our farming; the spirit of inquiry and investigation is abroad; much useful information is being diffused in our agricultural journals, which are increasing in interest, in numbers and in circulation; and it is hoped that our legislators will ere long find leisure to turn their attention to this great interest, and assist to elevate it to the rank to which it belongs, as well in a political as in a pecuniary point of view. For agriculture, in reality, constitutes the foundation upon which the fabric of our social, moral and political institutions are based, and upon which they must ever depend for support and prosperity.

Ploughing.

[FROM THE COMPLETE PRACTICAL FARMER.]

Ploughing is justly considered the most important of agricultural operations, as on the manner in which this is performed, depends the facility of executing all succeeding operations on the same piece of land. The manual operation of holding the plough in a proper position, and directing the horses or cattle which draw it, at the same time is only to be acquired by experience; when once attained it is perhaps one of the most agreeable and healthy of agricultural exercises, the body being kept upright, the arms and legs being brought into action, and also the eye and the mind, to keep the furrow straight, and of regular width and depth, and the voice to speak to the horses.

Three different points require particular attention in ploughing; 1st, the breadth of the slice to be cut; 2d, its depth; and 3d, the degree in which it is to be turned over; which last circumstance depends both upon the construction of the plough, particularly the mould-board, and the care of the ploughman.

The breadth and depth of the furrow slice are regulated by judiciously placing the draughts on the nozzle or bridle of the plough; setting it so as to go more or less deep, and to take more or less land or breadth of slice, according as may be desired. In general the

plough is so regulated, that if left to itself and merely kept from falling over it would cut a little broader and a little deeper than is required. The coulter is also placed with some inclination towards the left or land side, and the point of the soc or share has a slight tendency downwards.

The degree to which the furrow slice turns over is in a great measure determined by the proportion between its breadth and depth, which for general purposes, is usually as three is to two, or when the furrow is nine inches broad it ought to be six inches in depth. When the slice is cut in this proportion, it will be nearly half turned over or recline at an angle of forty or forty-five degrees; and a field so ploughed will have its ridges longitudinally ribbed into angular drills or ridgelets. But if the slice is much broader in proportion to its depth, it will be almost completely overturned, or left nearly flat, with its original surface downwards; and each successive slice will be somewhat overlapped by that which was turned over immediately before it. And finally, when the depth materially exceeds the width, each furrow-slice will fall over on its side, leaving all the original surface bare, and only laid somewhat obliquely to the horizon.

Ploughing with the breadth and depth nearly in the proportion of three to two, is best adapted for laying up stubble land after harvest, when it is to remain during winter exposed to the mellowing influence of frost, preparatory to fallow or turnips.

The shallow furrow of considerable width, as five inches in depth by eight or nine wide, is understood to answer best for breaking up old leys, because it covers up the grass turf, and does not bury the manured soil.

Ploughing with the depth of the furrow considerably exceeding the width, is a most unprofitable and uselessly slow operation, which ought seldom or never to be adopted.

The most generally useful breadth of a furrow-slice, is from eight to ten inches, and the depth ought to be seldom less than four inches, except in soils uncommonly thick and fertile. When it is necessary to go deeper, as for carrots and some other deep-rooted plants, a trench ploughing may be given by means of a second plough following in the same furrow.

Shallow ploughing ought always to be adopted after turnips are eaten on the ground, that the manure may not be buried too deep; and also in covering lime,—especially if the ground be pulverised by fallowing, because it naturally tends to sink in the soil. In ploughing down farm-yard dung, it is commonly necessary to go rather deep, that no part of the manure may be left exposed to the atmosphere. In the first ploughing for fallow or green crops it is advisable to work as deep as possible, and no great danger is to be apprehended, though a small portion of the subsoil be at that time brought to the surface.

The furrow-slices are generally distributed into beds varying in breadth according to circumstances; these are called *ridges* or *lands*, and are divided from one another by gutters or open furrows. These last serve as guides to the hand and eye of the sower, to the reapers, and also for the application of manures in a regular manner. In soils of a strong or retentive nature or which have wet close sub soils, these furrows serve likewise as drains for carrying off the surface water, and being cleared out, after the land is sowed and harrowed, have the name of *water-furrows*.

Ridges are not only different in breadth, but are raised more or less in the middle on different soils. On clayey retentive soils, the great point to be attended to is the discharge of superfluous water. But

narrow ridges or *stitches* of from three to five feet are not approved of in some of the best cultivated counties. In these a breadth of fifteen or eighteen feet, the land raised by two gatherings of the plough, is most commonly adopted for such soils; such ridges being thought more convenient for manuring, sowing, harrowing, and reaping than narrower ones; and the water is drained off quite as effectually.

Ridges on dry porous turnip soils, may be formed much broader; and were it not for their use in directing the laborers, may be, and sometimes are, dispensed with altogether. They are often thirty or thirty-six feet broad, which in Scotland are called *ban uin* ridges, because reaped by a band of shearers, commonly six, served by one binder. If it be wished to obliterate the intermediate furrows, this may be done by casting up a narrow ridgelet, or single bout ridge, between the two broad ridges, which is afterwards levelled by the harrows.

The mode of forming ridges straight, and of uniform breadth, is as follows: let us suppose a field perfectly level, that is to be laid off into ridges of any determinable breadth. The best ploughman belonging to the farm conducts the operation, with the aid of three or more poles shod with iron, in the following manner: the first thing is to mark off the head ridges, on which the horses turn in ploughing, which should in general be of an equal breadth from the bounding lines of the field, if these lines are not very crooked or irregular. The next operation, assuming one straight side of the field, or a line that has been made straight, as the proper direction of the ridges, is to measure off from it, with one of the poles, half the intended breadth of the ridge, if it is to be gathered, or one breadth and a half, if to be ploughed flat: and then the ploughman sets up a pole as a direction for the plough to enter. On a line with this, and at some distance, he plants a second pole, and then in the same manner, a third, fourth, &c., as the irregularity of the surface may render necessary, though three must always be employed,—the last of them at the end of the intended ridge, and the whole in one straight line. He then enters the plough at the first pole, keeping the line of poles exactly between the horses, and ploughs down all the poles successively; halting his horses at each, and replacing it at so many feet distant as the ridges are to be broad; so that when he reaches the end of the ridge, all his poles are again set up in a new line parallel to the first. He returns, however, along his former track, correcting any deviations, and throwing a shallow furrow on the opposite side of his former one. This mode has a decided preference over the common practice of laying the two furrows first towards each other. By first throwing them from each other, and then reversing them, the whole ground is ploughed: and if the first furrows are shallow the ridge has but a slight elevation in the centre. These furrows when reversed, form the crown of the ridge, and direct the ploughmen who are to follow. The same operations are carried on until the whole field is marked out.

Direction and length of ridges are points which must evidently be regulated by the nature of the surface, and the size of the field. Short angular ridges called *butts*, which are often necessary in a field of irregular boundaries, are always attended with a considerable loss of time, and ought to be avoided as much as possible.

In ploughing steep land, it is advisable to give the ridges an inclination towards the right hand at the top, by which in going up to the acclivity, the furrow falls more readily from the plough, and with less

fatigue to the horses. Another advantage in forming ridges in a slanting direction on such land is, that the soil is not so likely to be washed down from the higher ground, as if the ridges were laid at right angles. Wherever circumstances will permit, however, the best direction is due north and south, by which the grain on both sides of the ridge enjoys nearly equal advantages from the influence of the sun.

In ploughing relatively to season it is well known that clayey or tenacious soils should never be ploughed when wet; and that it is almost equally improper to let them become too dry; especially if a crop is to be sown without a second ploughing. The state in which such lands should be ploughed is what is commonly indicated by the phrase, "between the wet and the dry,"—while the ground is slightly moist, mellow, and the least cohesive.

Night Soil.

[FROM THE NEW-ENGLAND FARMER.]

Night soil is not alone distinguished from the ordure of all animals by the extreme fetidness of its smell, but it is also known to be a stronger and hotter kind, and probably differs in its own qualities in proportion to the sort of provision from which it is obtained; as there is every reason to suppose that the excrement arising out of animal food is of a more active nature than that which is the produce of vegetable diet. In all those places where the real value of this feculent matter is duly appreciated, and its preparation well understood, the aversion which its use excites, is surmounted, and it is then preferred to all other manure.

The repugnance to this manure proceeds from an idea that this manure communicates an unpleasant flavor to plants grown in the land upon which it has been used; and it has been also thought to have a bad effect upon the soil. Both of these objections, are, however, groundless, when due care is applied to its management. Instances are indeed said to have occurred, in which horses have refused the hay made from grass which had been manured with night soil. But if credit is to be attached to the assertion, it must have been produced by its having been spread in a fresh state, and upon grass of a very forward growth. In proof of this, is an instance mentioned in the Norfolk Report, of a field newly laid down to grass, every part of which proved very poor, except two acres, on which four waggon loads of night soil were spread directly, without being mixed with any other manure. The field was fed off, and the effect of the night soil, is said to have been so great, that while the rest of the field never seemed more than half filled with useful plants, this was thickened surprisingly, and grew most luxuriantly; so much so that the cattle neglected the rest of the field and were perpetually feeding there, until by autumn, it was pared down, like a fine green lawn, by the side of a dusky rough and ragged pasture.

In other accounts, it is indeed reported as the most capital manure, of all other sorts, for pasture; two wagon loads securing "a carpet of herbage;" and no bad effect is perceptible on profusion. All unpleasantness of odor may indeed be prevented by the mere use of ashes or lime; and were these thrown upon night soil, or into privies which have no communication with sewers, the ashes made in every dwelling house would so completely absorb the fluid, that a solid heap

of manure would be produced, that might be afterwards removed without difficulty or offensiveness. It is collected in large quantities in London; and there was a few years ago, a large manufactory for its preparation, in which it was dried and exposed to the sun on flag stones, after which it was broken in pieces, and removed under cover, where it was partially mixed with lime and completely reduced to powder. In this state, it was packed in barrels, and exported even to our colonies, where it was used as a top dressing; but it was chiefly employed by market gardeners, who used to sow it in drills along with their seed; and judging by the price at which they bought it, there can be no doubt that they found its use to be singularly advantageous.

Its operation has been found quicker and more powerful than farm-yard dung. Farmers who have used both on adjoining land, have observed that the crops are always more exuberant in the first year, where the night-soil has been laid, but that little or no difference has been perceptible after. To every load of night soil should be added about four or five times the quantity of pond mud. Young gives the result of two experiments on manures of different kinds and qualities, applied to potatoes, on a poor gravelly loam, in the following proportions per acre:

					1st Crop.	2d Crop.
No. 1.	No manure,	-	-	-	120 bush.	140 bush.
2.	Night soil, 10 wagon loads, each 96 bushels, -	-	-	-	600 do.	640 do.
3.	Night soil, 6	do.	do.	do.	650 do.	500 do.
4.	do. 2	do.	do.	do.	500 do.	300 do.
5.	Bones, 10	do.	do.	do.	650 do.	640 do.
6.	do. 6	do.	do.	do.	640 do.	560 do.
7.	do. 2	do.	do.	do.	560 do.	240 do.
8.	Hog-dung, 60 one-horse cart load,				480 do.	300 do.
9.	do. 30	do.	do.	do.	480 do.	160 do.
10.	Yard-comp. 60	do.	do.	do.	300 do.	240 do.
11.	do. 120	do.	do.	do.	480 do.	300 do.
12.	do. 30	do.	do.	do.	140 do.	140 do.

[*British Husbandry*, Vol. 1. p. 267.]

The Police of Filth in Towns, and its bearings on Comfort, Decency and Health.

[FROM THE FARMERS' REGISTER.]

The delightful season of opening summer has arrived, and the face of the earth, as formed by nature, and not deformed by man, is seen in its fairest aspect and brightest colors. Every thing shows life, in youth and beauty, and nothing yet exhibits indication of decay.—Every feature of the natural landscape, in every region, however varied, is beautiful to the eye. The most barren and worthless of our lands, though the most wretched in appearance after cultivation, before being touched by man, are covered with magnificent forests. Nature has not made a scene that is displeasing to the eye; and even this granite region, barren and unsightly as much of it now is, was once one wide scene of universal beauty. It is man that wastes the beauties and blessings of nature, and deforms and defiles whatever he touches.

The opening of summer in our towns, presents a very different aspect, and is accompanied with very different associations. It is true, that some beautiful gardens are seen, in which the hand of man, (or more generally of woman) has improved on nature, by bringing together, in numbers, nature's choicest ornaments. But these are exceptions to the general appearance. The broad sloppy flats, receptacles of collected rain water and oozes from hill-sides, which during winter and spring merely barred the way of walkers, or, at worst, gave them wet feet, and colds and pleurisies, now are drying up without the Corporation being put to the cost of the small amount of ditching, that would have kept the ground dry at all times. A "green mantle" overspreads the standing pools—and all will soon become a naked, ugly, and foul-scented mud. The thickly settled and commercial parts of towns may, perhaps, have nothing visible, worse than men and merchandize, brick houses and paved streets; but all the out-skirts and vacant places are full of abominations to cleanliness and health, and of offence to the nostrils, as well as to the eyes. The commencement of warm weather gives activity to decomposition, and the soft air is redolent of its products; and in sundry different spots of every town, the effluvia arising from filthy kept yards, of stables and hog-styes, of privies—and sometimes the breezes tainted by a dead cat, or, if without the suburbs, by carrion of larger kind—are offered to our sense of smelling in doses of various degrees of intensity, and in every variety of combination. We become accustomed by the habit of endurance to these, as to all other evils, and in time are scarcely conscious of the magnitude of the nuisance. But its offensiveness is estimated at the true value, by visitors fresh from the pure air of the country.

Now approaches the time when the Police and the Board of Health will begin to bestir themselves to abate nuisances of this kind, but in such a way as to effect no manner of benefit. Their operations merely consist in moving decomposing matter, or its sources, from one spot to another, there to proceed as before—and by thus moving and dispersing filth, to hasten its decomposition still more, though rendering its products less evident by their being more widely diffused. But the total amount of the production of such effluvia is not the less in quantity, nor the less hurtful, because by being more wide-spread, and diluted, and by contaminating more of the atmosphere, the scent is less concentrated and offensive. All the operations of the most industrious and zealous Board of Health do not lessen the amount of decomposition within the limits of a town, unless the putrescent matter is actually thrown into and floated away by a rapid river, or otherwise conveyed away to poison the air somewhere else, where there may be fewer people to breathe of it. Every removal and exposure of new surfaces, serve, only to quicken the progress of decomposition.

It is not a little remarkable that this general state of filthiness is caused and maintained, in a great degree by the fastidious or squeamish nicety of our people. It is almost universally considered that it is quite too dirty a business, too offensive to the imagination, as well as to the senses, to use carrion and human excrement for manure.—If this silly prejudice did not operate, and if proper economy were used to collect, preserve and apply these rich and most decomposable substances, the profit which they would bring as manure, would far more than pay for the expense of the proper procedure to preserve the matters, and at the same time to maintain cleanliness. But it is not

only that the contents of privies are suffered to accumulate because of their being no profitable demand for them, (as exists in countries where the worth of manure is better understood,) but there is that want of accommodation in the number and situation of privies, which operates to the injury of comfort, of decency, and in many cases, directly as well as indirectly, to the injury of health. We are so exceedingly nice or proud, that we desire to conceal the existence of such humiliating necessities of our nature; and no conveniences for the purpose are provided, and kept in proper order for public use: and the privation is a matter of extreme inconvenience to all decent visitors, to a town, who have not acquired a knowledge of, and a right to use some such places. The same morbid feeling of shame, that prevents on the one side the accommodations being afforded, also prevents on the other any complaint of the want of them. But the ground for complaint does not the less exist—as every countryman can testify, and even every townsman, when visiting another town than his own. So nice and squeamish are our people on such subjects, that to treat of it by word or writing, would be considered by very many as both ridiculous and offensive; and when one ventures still farther, as I shall do, to recommend modes of removing the nuisance, and converting it to profit, there is much ground to expect that nothing will be excited, except a sense of the ridiculous in some, and a feeling of disgust in others. But I have never been deterred from urging what was deemed highly expedient, by the dread of being laughed at, and as to exciting disgust, it is just what is desired, provided it can be directed against the habits which are held up to condemnation.

In large cities, necessity has compelled the adoption of means to get rid of excrementitious and other filth, by a general system of sewers, or subterraneous passages, into which, all such matters are thrown, and by the flowing of water through, in abundance, they are washed into the adjacent river. The sewers of some great cities have been constructed on a plan so vast, and at so much expense, and were so excellent in their operation, that they have been considered as not less worthy of admiration than their magnificent temples and palaces. If the only object was to cleanse the town, and there was sufficient command of water and of money, there could be nothing to object to this plan. Certainly the expense of constructing the sewers would be an objection not worth notice, when compared to the value of their intended effect. But if the system were not perfect, and the supply of water always abundant, the evil would be made so much the greater by being concealed from observation. There is another objection to this plan, in its contaminating and corrupting the waters of the rivers into which the sewers empty; and it may well be doubted whether water so defiled, does not itself throw off deleterious effluvia, and is not rendered more liable to cause decomposition in whatever decomposable matter it may reach: and thus that the waters are not only made to stink, but also to poison those who have destroyed their purity. But the greatest objection to this plan is the utter destruction of so enormous an amount of rich manure, which if properly preserved and applied, would soon make rich and fruitful the poorest surrounding country. And to properly accumulate and preserve all this manure, and prevent its being offensive to the senses, or injurious to health, might in most cases, (and certainly on all the eastern coast of the Southern States,) be effected not only at less cost than by a proper system of sewers, but at less than the present wasteful and ex-

pensive system of employing laborers, under direction of the town police, and boards of health, so to stir up and move about the excrement, as to produce its most speedy decomposition, and total passing off into the air, and thereby to give the full benefit of its evolving effluvia to the nostrils of the towns-people.

The remedy is that which has been proposed in general terms in the preceding part of these observations, to provide *calcareous earth* (either marl, or whatever other form may be cheapest,) enough to cover every spot in the town, in which decomposable filth can accumulate; and this to be renewed from time to time, as needed. The calcareous matter would form a chemical compound with the putrescent, so as to preserve the latter from all waste, and from giving out any offensive odor; and once a year, (when in situations not convenient at all times,) and in cold weather, the accumulations might be removed to the country to be used as manure; and the richest as well as the most permanent manure in the world, this compound of animal and calcareous matter would be.

The object would be to *accumulate*, as much as possible, instead of *dispersing*, the most putrescent matters. And for this purpose, as well as to afford the general accommodations now so much required for comfort and for decency, and also for health, there should be large and well constructed privies erected in suitable situations, and at convenient distances apart, throughout the town, free for the use of all males without exception. The pits should be large and sufficiently deep, but accessible to carts, to bring marl, and to remove the contents.—At the expense of the town (as the whole system ought to be,) there should always be kept a heap of rich marl near to each pit, and a sprinkling, once or twice a day, over the excrement, would effectually secure it from wasting, or being offensive.—By such places of accommodation being furnished, and kept in the neatest condition by regular attendants, there might be, and would be abated many of the small private receptacles, which necessarily (as now managed) are more or less filthy nuisances. And the *buckets* which now are at night emptied on all vacant and forbidden spots, (and requiring the uneasy activity of the Police and Board of Health to attempt to prevent,) would be then emptied into these pits, with certainty, simply because they would offer the nearest and most convenient places of deposite. There would then be no inducement remaining for the defiling of every spot of vacant ground; and such places, instead of being abominations to the senses and the minds of all decent observers—and absolutely forbidden to the footsteps, and even to the distant view of modest woman—would be clean and lovely grass plots, serving to refresh and relieve the eyes tired of seeing brick walls and stone pavements. I will touch but gently on the *moral* nuisance that exists in so many cases in every town, where these vacant spots, the only public places “of ease,” are overlooked by the back windows of the houses of respectable families, the members of which, though at considerable distances, are nevertheless unavoidably subjected to witness indecent exposures, still more offensive to the mind than to the eye.

In addition to the public and general accommodations proposed, there should be a certain and sufficient quantity of marl carried at certain intervals of time, to every private lot, (unless the occupant took measures to provided himself with it,) to be used as wanted, for similar purposes. This would prevent, what is almost impossible

now to avoid, there being offensive accumulations, or still more offensive removals and dispersions, of fœcal matter or private lots.

It would be impossible to approach the truth in estimating what would be the expense of such a system in any particular town, until it shall have been tried. But there can be no doubt but that the benefits would far overbalance the cost. Many expenses and evils, much worse to bear, and now continually encountered, would be, by these means, avoided. Such of these as bear on private individuals, I pass over without notice. For one item, the public would save all that part of the labors of their police, which is now most unprofitably devoted to this object.

But even if it is admitted that the means proposed would be as effectual as I imagine, in preserving cleanliness, and cutting off sources of disease—and that the compound formed is of all the supposed value as manure, still it may be objected that it would be long before prejudice and incredulity will be so removed as to make this manure an article of sale—and consequently, that all expectations of returns from sales must be visionary. Even if there should be no sales for two or three years and if the manure should be merely taken for the trouble of carrying it away, the expense would be well afforded as a mere matter of police. But two years' use would make manifest the value of this compound manure, and the demand and the price would afterwards gradually increase, until it would nearly or quite defray the whole expense of the plan.

But the town of Petersburg has at once the best possible customer for all that the plan would supply for some years. in the farm of the Poor House, belonging to, and cultivated at the expense of the town. To this land, now much putrescent manure is carried, removed by the Police from the town. But except in winter, or at the rare and other short periods when manure can be (or is) at once advantageously laid on the field, these supplies are heaped up for future use, and of course, rot away as rapidly as possible, and give ten times as much of their products to the air as to the soil. Besides—even if there was not necessarily this great waste from the decomposition of manure altogether putrescent, when moved and heaped in warm weather, there would be very little profit from its application. The lands lying over the belt of granite which passes through Virginia, and which forms the falls of the rivers flowing to the Atlantic, are naturally, among the most destitute of lime, and consequently are among the poorest and the least capable of retaining putrescent manures when applied to them. Such are the lands surrounding and within a few miles of Richmond and Petersburg, and probably all the other towns at the falls of our rivers. Particularly individuals, by lavish use of the cheap and rich manure of the public stables, have highly, though but for a short time, improved some of these lands, and reaped heavy crops, and, possibly, made great profits. But still the demand for such manure by the hungry, yet wasteful soil, is continual, and if it is not frequently repeated, the original poverty soon returns. But few persons have used these means to much extent, and most neighbouring residents are satisfied that the town manure is too costly to be carted to their farms.

Yet though the richest stable manure, (richest because it is principally of animal matter,) may be bought from the tavern and livery stables at 12½ cents for the largest single horse loads' (20 to 25 bushels,) it mostly rot away in bulks in the stable yards, for want of regular

purchasers even at the low price. So it is however, from the little town manure carried to neighboring farms, the little permanency of effect of what is used, and the general impression that it is not worth using—it results that most of the lands, lying even within the short distance of a mile from the towns, are wretchedly poor, and yield but little for the support of the town, either in grain, grass, or garden vegetables for market. Indeed it may well be doubted, whether a large proportion of the population of the vicinity do not buy (or obtain otherwise) from the town, as much provision as they sell to it. This state of things has continued, with but little actual improvement, as long as these towns have stood; and it may safely be predicted, that unless calcareous manures are used to fix the otherwise fleeting value of the putrescent matters, that the general condition of things will never be much better. It is not then strange, that with the neighboring farms so poverty stricken, the town markets should be badly supplied, and at high prices, with all the small articles of daily purchase and consumption, which though small, make up the greater part of the comfort, and (at usual prices) cause the greater part of expense of living.

Just let the reader imagine what would be the difference in these respects, if the land surrounding each town, for as much as six miles distance, were as rich as they well could be, and produced in abundance, clover and other grasses, a full supply of garden vegetables and other small articles for the daily markets, besides their large crops of grain and other staple products. The comforts of all persons living in town, so far as they depend on food, would be greatly increased, while the expenses of living would be made less than at present—and yet the suppliers of the market would be better rewarded than by the present miserable system, because rich land and good farming can always undersell the poor and unproductive; and at a market generally well supplied is a more sure, and therefore a better place of sale, than where demand is irregular, and, of course, prices irregular, though often very high. It will be under such a state of improvement that market gardens and market farms will be profitably kept—and the towns will be abundantly supplied, and from their neighborhood, with milk, cream, butter, eggs, fowls, and fresh meat of fat young animals, as well as with vegetables. The surplus product of hay, grain and other field crops, of such highly enriched districts, would make no small addition to the sales and the export trade of the towns, and would serve to increase their population, and thus furnish a still increased demand for the products of the neighboring lands. It is also probable, that if the fish, of the rivers which flow by towns, were not driven away by the filthiness of the water, that their numbers would be greater on account of the neighborhood of a town, (and the abundance of food thrown in the water,) instead of being reduced almost to nothing, as is notoriously the case. Even the shad and other fish of passage, whose instinct strongly impels them to seek the higher waters of rivers, to deposite their spawn, are mostly deterred from passing through the flood of filthy water that a town supplies; and the people on the upper waters suffer thereby a privation, as do the townsmen by the driving to a distance the more fixed residents of our fresh water rivers.

It may however be reasonably objected, by those who have not studied the qualities of soils and manures, that too much value is counted on from the use of this proposed compound matter. It would

be unnecessary here to repeat at length all the grounds on which that estimate is founded. For the amount of early and annual increase to be expected from marl on naturally poor soils, and for the permanency of its effects, I refer to the reasoning and the facts presented in the *Essay on calcareous Manures*, and also to the opinions of the hundreds of farmers in lower Virginia who are now thus improving their lands. For the chemical power of calcareous earth in combining with, and preserving from waste, putrescent matters, I refer to the general reasoning on this head in the *Essay*, and the statements made in the first of these communications. As to the enriching value of human excrements, it is known in Europe and in China, that they are the richest of all. In England, it is stated in agricultural books, that two wagon loads is a sufficient dressing for an acre—probably because more at once would be hurtful to the crop.

In France, there are in operation regular establishments set up by private adventurers, for desiccating, and thus preparing for use, the products of the privies and public sewers of large cities; and sufficient profits are made to support these establishments, by selling the dried manure (*poudrette*) to the farmers. Its great richness, in small weight and bulk, makes it well suited for distant transportation, and extensive sale. From the accounts that I have read of these establishments, it may be inferred that much previous decomposition, waste of value, and extrication of offensive effluvia, must take place in the material, before it is brought to the desiccating establishment—and that both the previous and subsequent manual operations must be highly disagreeable and disgusting. Besides, the desiccation seems to be sought more by mechanical than by chemical means—and any dry pulverized earthly matter is used to absorb the fluid and make the mixture dry. There does not seem to be much choice in the earthly substances. Thus they propose gypsum, and burnt earth, and quicklime, as well as chalk, rubbish of demolished buildings, and coal and wood ashes. The first two of these substances, according to my views, would be of but little effect, acting as they do only mechanically; the quicklime, (which it seems is preferred,) would be decidedly injurious; and the mild calcareous character of the latter substances would render them, only proper for the desired results. The profit of this business in France alone, would be sufficient proof of the greater value of the far more simple, economical and effectual and cleanly plan which I recommend, and which is also perfectly in accordance with the chemical properties and action of the substances used in the compound.

The Brussa Mulberry.

[FROM THE FARMERS' REGISTER.]

We are indebted to Mr. Rhind, (who negotiated the treaty of the United States with Turkey, and was long a resident of the latter country,) for the following extracts which formed part of a correspondence between Mr. Rhind and Judge Spencer of New-York. Mr. Rhind has taken so much interest in this subject and has had such good opportunities to form correct opinions, that his authority deserves to be held in great respect. His favorable opinion of the Brussa mulberry, therefore, offers a sufficient inducement to rear that kind, and

give it a fair trial of comparison with others. But we should at present distrust the *seeds*, for propagating the same kind, unless it is avowed that they have been tried, and found not to produce other varieties, as is the case with the *Morus multicaulis*.

Extract of a Letter from Mr. Rhind to Judge Spencer.

"During the reign of the emperor Justinian, when the two monks were sent by him to *Seres* to bring from thence the eggs of the silk worm, it is natural to suppose that they would also adopt the precaution to bring with them the seeds of the tree which afforded the *pabulum* or nourishment for the insects; and it is highly probable that while the hollow cane of one monk carried the eggs of the insect, that of the other carried the seeds of the tree;* if such was the case, the first mulberry plantations must have been in the vicinity of Constantinople. The country called *Seres*, by the ancients is generally admitted by modern writers, to be *Little Bucharina*, and that country is situated in a latitude similar to Brussa, in Asia Minor, not far from Constantinople. This species of the mulberry flourishes best in high and even poor lands; and *Brussa*, being situated on the rise of Mount Olympus, has a climate and soil closely resembling that of *Little Bucharina*, and the superior quality of the *Brussa* silk, over all others, in the markets of Europe, would seem to evince a congeniality of soil and climate. Mount Olympus is perpetually covered with snow, and the basis of the mountain (near which *Brussa* is situated,) being in my opinion more similar to our climate than an other in the latitude, I was induced to select the seed of the *Brussa mulberry tree* in preference to those of any other place, as one more likely to endure the rigors of our severe winters, and not be so subject to the effect of the frost, as trees brought from more southern latitudes, or warmer climes.

"The leaves of the *Morus alba* of Brussa are said to contain a much greater quantity of saccharine matter, than any other of the white species, and moreover, the leaf is much larger than those of Italy and Spain; it is also a hardy tree, susceptible of being raised in climates where the frosts are severe. I therefore believe, that the *Morus alba* of Turkey, is decidedly the best for our climate, and next to it those of Italy and Spain; although the latter were, I presume, originally obtained from the east, as we find the culture progressing from Asia, through Greece, Sicily, the Balearic Islands, Spain and Italy, and eventually to the south of France. It is probable that the species has degenerated more or less in those countries, since neither of them produce an article of commerce, equal to that of Brussa, notwithstanding the cultivation and manipulation of silk, in Turkey, is far inferior to that of Italy or France; I consequently attribute the superiority in the quality of the former, to the greater quantity, or richer nature, of the nutritive substance contained in the leaf.

"The *Morus multicaulis*, although possessing a larger leaf than those of Brussa, does not, I apprehend contain an equal quantity of nutritive matter. Count Dandolo says, that the leaves of the broad leaved white mulberry, contain but little saccharine matter; and I hence infer that the *multicaulis*, being of similar species, contain less saccharine matter than the *hardy alba* of colder climates. In southern latitudes, similar to those of China, where it is said to be culti-

* Some authors affirm, that the monks first brought the seed of the tree only, and that the emperor sent them back to *Seres*, for the eggs of the insect.

vated to most advantage, and where frosts are unknown, the *multicaulis*, may be most suitable; but for our climate, the *Morus alba* is decidedly the best and safest. Future experiments will doubtless elicit the comparative excellence of the different species. But since we know that the *Brussa tree* is of superior quality, and I have proved that it will endure the severity of our winters, (for the last three were unusually severe, and although young as they were, not a single tree was lost,) hence they may now be considered as acclimated.

"That silk can be produced with infinitely less trouble than is generally supposed, I am fully persuaded; and I have, in the course of my travels, visited most of the silk growing countries, and gave considerable attention to the subject.

"The culture of silk is peculiarly deserving the encouragement of patriotic and benevolent men, inasmuch as it will afford (in its different manipulations,) a living to the most helpless of our race; *aged* and *decrepit* persons, and *children*, can all be employed in some part of the process, and to a portion of the female sex who may have been reared in luxury and indulgence, but by change of fortune have become reduced, yet are willing to labor, rather than depend on the cold hand of charity, or the benevolence of friends, this culture will afford a certain and independent living, without exposing them to the scoffs and scorns of a selfish world.

"In the city of *Brussa* containing about 100,000 inhabitants, their principal occupation is the production of silk. When the *crop-season* commences, the leaves are brought to the city by the cultivators, in baskets, and sold in the market in quantities to suit purchasers, in the same manner as fruits and vegetables. Almost every family, when the season begins, clear out the rooms of their dwellings, (reserving one or two apartments to live in,) and fill the rest on the *floors*, with the worm. The women and children chiefly attend to feeding them, and when the worms form the cocoons, (generally in about six weeks) *they* (the women and children) reel the silk, which is then ready for market, and thus in little more than six weeks, they gain sufficient to support their families, (in their simple style of living,) until the next season."

Extract of a Letter from Judge Spencer to Mr. Rhind.

"The trees which I received from you [*Brussa mulberry* of three years old] indicate great hardihood, and I should think, not only from their not having suffered at the extreme points, and also from Mr. Bradish's account of the trees, that they will endure our climate perfectly well; almost every tree has put forth leaves, and they are considerably larger and thicker than the white mulberry leaf. The *Brussa* leaf is nearly, if not quite equal to the *Morus multicaulis*."

At the annual fair of the American Institute, at New-York, in October last, specimens of the leaves of the *Brussa** tree, of different years growth, were exhibited, and excited universal approbation, and the institute awarded a silver medal for the introduction of this invaluable tree, observing in the report of the committee, "that *these* with every new and useful plant, calculated to withstand the rigors of our

* In the publication of the Institute, the word *Russia* has been erroneously substituted for *Brussa*—*vide* the publications of the Institute for November and December, 1836.

climate, are worthy of attention, and those introducing them into our country, deserve to be placed on the catalogue of our country's benefactors."

Wheat.—Important Discovery.

[FROM THE NEW-ENGLAND FARMER.]

The New-York Farmer publishes a letter from the Rev. Mr. Colman announcing an important discovery for the destruction of the grain fly.

"The grain fly or insect, which, for a few years past, has been destructive to wheat in many parts of the country, has this year extended its ravages, and excited wherever he made his appearance very serious alarm. An eminent farmer in the State of New-York, wrote to me a year since, that he must give up the cultivation of wheat, as his crops were so much injured, that he hardly obtained a return equal to the seed sown. I knew another instance in the same State, where, though the straw was large, and the appearance promising, yet from thirteen bushels sown, not more than seven were obtained.

I have known other cases in which the whole field has been mowed and sold for litter; and in a recent excursion up the valley of the Connecticut, I have heard complaints every where, and hundreds of acres so destroyed, that the grain they would yield would hardly pay for reaping. Besides this, the same insect has destroyed many fields of rye in the same manner as the wheat, and has been found this year in the oats: the progress of the insect has been about forty miles a year; and a distinguished gentleman in Vermont, a practical and extensive farmer, remarked that he feared they would on this account be obliged to relinquish the cultivation of small grains.

The habits of the insect have not yet been accurately observed. I myself have not yet seen the fly, but have seen the worms in the kernel after the grain has been destroyed. He is represented as being a small reddish fly, which is seen hovering over the wheat fields in immense numbers, while just in flower, and has been observed to light upon the kernel or bud, to ascend it, and then descending to the inner side, to deposite her egg between the stalk and the kernel. I purposely avoid the use of all scientific terms, wishing to be understood by common farmers. From this egg the worm is generated, which entirely consumes the grain while in the milk, leaving nothing but the husk, in which are found several yellow worms about an eighth of an inch in length. As the work of destruction is now completed, any farther observations are of no importance, unless we can some way reach so as to destroy the germ of the insect. No preparation of the seed or ground has yet been found effectual to this end.

The continuance of the fly upon the grain is thought not to exceed three or four days, and they are seen in great numbers just at night. Some farmers have found late sowing a partial security, as the season for the flies has passed away before the wheat was in condition for their attack.

Spring wheat sown as late as the 7th and 8th of June, has been untouched, though in case of such very late sowing, the farmer will be fortunate if, in attempting to escape the fly, he does not get nipt by the frost. I have now, however, the extraordinary happiness of announcing to the agricultural public, what there is reason to believe,

will prove an effectual, as it is a reasonable and feasible preventive. Should it prove effectual, the remedy will be worth millions and millions of dollars to the country. It was communicated to me, on a late tour of agricultural inquiry and observation, by Dr. Eliquant Lyman, of Lancaster, New-Hampshire, an intelligent, enlightened and practical farmer, whose crop of wheat usually averages from 25 to 30 bushels per acre. It consists in the application of fine slacked lime to the wheat, just at the time of its heading out and flowering, at the rate of about a peck to the acre.

It is sown broadcast upon the wheat while the dew is on, and the field is rendered white with it. The best mode of applying it is with the hand, and for the person who sows it, taking his proper breadth or cast, to walk backwards, so that he may not cover himself with the lime. It must be sown while the wheat is wet, or the dew is on, and the philosophy of its application is very simple. The maggot of the fly is deposited between the grain and the stalk. It is, of course, an animal substance. The lime or alkali, mixed with the dew, is carried down upon, and neutralizes or destroys it. Dr. Lyman has now tried this preventive three successive years, and has invariably as he assures me, saved his crops, while those of his neighbors have been destroyed.

I visited at the same time, the field of a Mr. Bellows, in the same town who had been advised by Dr. Lyman, to make this application. The field consisted of several acres. He did it; it has proved successful, and what is strongly confirmatory of the value of this remedy, is the fact that a field of rye, belonging to Mr. Bellows, adjoining this wheat, and I think within the same enclosure, which was not limed, has been nearly destroyed by the fly.

These are certainly very important experiments, and I make no delay in presenting them to the public. Dr. Lyman has promised me a more particular account of the experiment and result, and likewise Mr. Bellows, which as soon as received, I shall be happy to communicate. I have received indirect and indefinite communications, that the same experiment has been successfully made in Gilmantown, N. H.; but I have not been able to obtain either the name or the details.

HENRY COLMAN.

Meadowbanks, May 10, 1837.

Curing Clover Hay.

[FROM THE TENNESSEE FARMER.]

Clover hay should never be scattered out of the swath, because in addition to the labor in scattering and again raking up, the hay is thereby greatly injured. Indeed, if the weather be favorable for curing, neither timothy nor any other kind of hay should be scattered, because the less any grass is exposed to the sun and air in the process of curing, the greater will be the value of the hay, and the less the labor required.

Let the clover lay in the swath untouched, until about two-thirds of the upper part be sufficiently cured, which, in good weather, will, if the swath be tolerably heavy, be effected in eight or ten hours; if the swath be light, in a proportionably shorter time, when thus far cured, turn the swath bottom upwards with the fork, an operation

speedily performed. Let it then lie exposed to the sun until the under side be cured, which will be, according to the thickness of the swath in from four to six hours, then throw three swaths together in windrows, and commence hauling in, the wagou running between two windrows and loading from each. It can hardly be necessary to observe, that all these operations must be performed after the dew has dried off. It is to be recollected that clover will keep with less drying than almost any other grass. A common test is, to take up a bunch of hay and twist it; if no juice exudes, the hay may be hauled in with safety,—we have often hauled in clover cut in the morning, in the evening, and always the succeeding day, unless prevented by bad weather—sprinkling every layer of hay with salt, at the rate of 12 or 15 lbs. to the ton, or interposing a layer of dry straw, from six to twelve inches thick, between every two layers of clover of the same thickness, we found a great perservative; and especially the latter mode will enable the farmer to put up hay in a far greener state, than could otherwise be done with safety. Besides this advantage, the straw interposed between the layers of hay, by absorbing its juices, will be rendered much more valuable as provender, and if salt be sprinkled on the hay will be greedily consumed both by cattle and horses. From the great quantity of this grass produced on an acre, its highly nutritive quality, the ease with which it is cut and cured, farmers will find that clover hay is the cheapest food on which they can keep their stock in good order during the winter. If put up in good order during the fall, sheltered from bad weather, and salted, both horses and cattle will keep fat on it alone throughout the winter, without the aid of grain unless when worked.

The prevalent notion, of the difficulty of curing clover hay, is entirely erroneous. In a climate like ours, there will seldom be found any; in a wet and cool climate, like that of England, the difficulty may exist to some extent as clover when put in cocks will not resist rain as well as timothy and some other grasses; but in the course of fifteen years experience, we have seldom lost any or had it much injured by the weather, indeed we have found it comparatively easier to save clover hay than corn blades, and as 3 or 4 tons of the former with the aid of plaster, can be made at least expense, than one ton of the latter, the farmer must be blind indeed to his own interest, who does not take care to provide himself with at least as much clover, as will furnish an abundant supply of provender for his stock.

Clover should be cut for hay when about one-half the heads have become of a brown color.—If cut earlier, it is believed the hay will not be so nutritious; if later, the stems will have become harder, and the grass be on the decline. For hogs, however, and young stock, it will be advisable to cut some so soon as it is in full bloom; when cut in this state and salted, hogs are very fond of it, and it is believed might be chiefly wintered on it, if otherwise carefully protected from inclement weather. At all events by the use of it as a food for hogs in part, a great saving of corn may be effected.

When the farmer can do it he will find a great advantage in providing himself with long narrow and high sheds, open at least on the south side for the preservation of his clover hay, and when hauling it in, to begin at one end, and spread a layer of hay along the whole length of the shed, and then repeat the same process; by this means he will be able to put up his hay, in a much greener state than could safely be done, if put either in a stack or mow, and as yet there are

but few persons in this country sufficiently expert in the art, as to ensure its preservation. In narrow sheds, one load is considerably dried before another is thrown on it, and when the sheds are filled, the narrowness of the bulk being so much greater, there is far less danger of injury to the hay by heating.

The Tobacco Interest.

[FROM THE FARMER AND GARDENER.]

We published below the correspondence of *Thos. F. Bowie, Esq.*, of Prince George's county, Maryland, and Messrs. *Riley & Van Amringe*, of Philadelphia, on the subject of high duties imposed upon American tobacco by certain governments of Europe, and the monopolies established by others, to the great prejudice of the interests of tobacco growers in this country. This correspondence is of the deepest interest, and contains statements and facts which deserve the utmost attention. The letter of Mr. Bowie is so full upon the subject of remedial measures, that it leaves us nothing to add, and we, therefore, invoke for it an attentive perusal, as well as for that of Messrs. *Riley & Van Amringe*. According in the views expressed by Mr. Bowie, we will add our humble hope to his, that the convention will not only be called, but act in that spirit of manly independence, called for by the wrongs of the tobacco growers, and our national honor.

Upon one of the statements of Messrs. *Riley & Van Amringe*, we propose to make a remark.—They compute that \$2,000,000 worth of Spanish tobacco and cigars are annually imported into our country; express the opinion, that “nearly, or quite all of this article could be grown in our own country,” and further observe, that “seed leaf is considerably grown in Connecticut, and some in Pennsylvania,” but that “these states are not so favorable to its production as states in lower latitudes.”

Upper Marlbro', June 19th, 1837.

MR. EDITOR—I send you the enclosed letter addressed to me by Messrs. *Riley & Van Amringe*, of Philadelphia, for publication in your paper, under the conviction that the information it contains, and the views expressed by the writers, will prove highly interesting and useful to those who feel an interest in the success of the efforts which are now making in favor of the Planters of Tobacco. You will recollect that much of the information which the Convention of Tobacco Planters recently held in Washington, derived, upon the subject of the Tobacco trade with foreign nations, and the high rate of duties imposed by them on Tobacco, was furnished by “a circular” addressed to them by the gentlemen who have written this letter; and, to no one are we more indebted, than to these gentlemen, for the zealous interest manifested by them in behalf of the measures which have been adopted, and are now in progress, to benefit the condition of the Planters of Tobacco, and to place that valuable and important branch of our trade with foreign nations, upon grounds of reciprocal advantage with all others. The views expressed by Messrs. *Riley & Van Amringe*, certainly deserve the serious consideration of the friends of these measures, and their attention cannot be too soon awakened to the importance of commencing early operations, with a view of call-

ing the attention of the next Congress of the United States to the subject. Our Tobacco trade with Foreign nations, is more valuable, by far, than that of any other article of export, with the exception of cotton; and, that too, under circumstances of the greatest disadvantage, clogged as it is with restrictions, monopolies, and excessive duties by foreign Governments.

The exports of Tobacco, from the United States for the last year, amounted to upwards of \$12,000,000, while that of cotton, amounted to upwards of 80,000,000. The Tobacco trade is, in fact, the second in importance and magnitude, which this country has with foreign nations, and, it is the duty of Congress to protect so large and valuable an interest, from the ruinous effect of foreign Government monopolies, and excessive duties.

Our exports of Tobacco, to England alone, for the year ending 30th September, 1836, where a duty of \$1,000 on every hogshead is paid, amounted to \$5,202,645. To France, where a Government monopoly exist, and where importation of American Tobacco is limited to 5,000 hogsheads only, the value of our exports of Tobacco, during the same year, amounted to only \$908,699. We imported from France during the same year, silk goods to the value of \$15,611,188; cotton goods to the value of \$2,199,982; wines to the value of \$1,942,179; and brandy to the value of \$1,109,846. Teas it will appear, that while France excludes our Tobacco, one of our most important branches of industry, we are in fact receiving with little or no duty, her silks, wines and brandies, all articles of luxury, to the value of \$18,663,193 per annum. I ask seriously, ought such a state of things be permitted to exist? Will the States of Virginia, Maryland, Ohio, Kentucky, Tennessee, Missouri, North-Carolina, and Indiana, any longer submit to so gross and palpable an outrage upon the prosperity and interest of their citizens? Congress ought, and no doubt will, if properly invoked, pass some retaliatory measures, against those foreign Governments who have conspired together, to exclude our Tobacco from their ports. The whole South will unite with us upon this question. They have evinced a disposition to do so already, and if we are but true to ourselves, we must intimately succeed. The wrongs and injuries we are suffering, are too monstrous to be tolerated any longer. For the last twenty years no people on the face of the globe have been more oppressed and plundered, than the growers of Tobacco in this country—their labor has been less rewarded, and their interest more neglected, than those of any other class of our population. It is now high time that they should awaken to a proper sense of their rights.

To the magnanimity, wisdom and sense of justice of the last Congress, the planters are much indebted for the favorable legislation of that body, upon a subject intimately connected with their prosperity, and we must look with intense interest to the result of those measures. But we must not permit our efforts to slumber. We shall hear, before the next regular period for the meeting of Congress, from some of our Foreign Ministers, who have received instructions from the President, upon the subject of a reduction of the duties on Tobacco by foreign Governments, of the probability of their success; and, in case their efforts, by negotiations, should be likely to prove unavailing, we ought to be prepared to resort to some other method, to obtain a redress of our grievances. The suggestions of Messrs. Riley & Van Amringe, on this subject, seem very appropriate at this time. Let

the planters of Tobacco petition to Congress at its next session, to adopt some retaliatory measures against these foreign Governments, which have either by excessive duties, Regies, or other monopolies, imposed such heavy restriction upon our Tobacco trade. It is a measure of self-protection which is called for by a just and proper regard for our interest, and, I cannot doubt, that it will meet with the favorable consideration of Congress. It is our duty, at all events, to use every exertion to produce so desirable a result, and I sincerely trust, that the Planters of Tobacco throughout the Union, will, by their firm and united efforts, evince a fixed determination to take up the matter seriously, with a view to some speedy and practical end.—You may have probably seen, that the President of the Convention of Tobacco Planters, which assembled in Washington last winter, has been invited to re-assemble that body some time during the first week of the next *regular* session of Congress. I hope it will be done; and that ample notice will be given of the time and place of meeting, so that a full representation may be sent from all the other States in the Union interested in the cultivation of Tobacco. No fitter occasion could be presented, than for that convention thus assembled, representing as it would, the entire interest of the great body of Planters of Tobacco in the United States, to send such a petition to Congress. Such an appeal in favor of our just rights could not be disregarded, without a total violation of those duties which a wise and parental Government so essentially owe, to so large and oppressed a portion of her people.

Yours, respectfully,

THOMAS F. BOWIE.

Philadelphia, 12th June, 1837.

THOS. F. BOWIE, Esq..

Dear Sir:—Your favor of March 9th was duly received, but was not answered earlier owing to the protracted absence of Mr. Van Amringe.

The Convention of Planters which met in Washington last winter, so far as the proceedings shew, confined its labors exclusively to the high duties on Tobacco in foreign countries. But, in our opinions, the Regies, or monopolies by the different governments of Europe, are much more serious embarrassments to the trade than the duties. High duties of course decrease consumption being, in a considerable degree, proportioned to the general prosperity and habits of the people, they are, by no means, so pernicious as exclusive monopolies. Our exports of Tobacco, for instance, to England, for 1835 were 27,563 hhds. valued at \$3,397,415. And in the same year we exported to the Hanse Towns 27,989 hhds. valued at 1,539,362. Thus you will perceive that the value of our Tobacco trade with England is more than double its value to the Hanse Towns; and yet the duties in England are more than six times the original cost of the article, while in the Hanse Towns it is a mere nothing. But no shipments of Tobacco are made in France, Italy, &c., but in the fulfilments of contracts with the respective governments, which of course excludes private enterprise.—France on an average, takes about 5000 hhds. from this country, which is supplied by two or three contractors. Austria is supplied by one contractor, and so of the rest. Thus we have only three, four, or five purchasers in our market for a very large proportion of our exports, instead of the usual mercantile competition. Competition is the life of trade. It not only operates bene-

ficially on a market during the continuance of the demand, but the activity begotton by it, is beneficial to the whole stock remaining on hand. Besides the stock always on the foreign merchants' hands (if the business were open to them) would probably equal one year's exports, which would of course be a great benefit to the growers of this country. But these Regies, or foreign monopolies, also prevent the growers of Tobacco of this country, from entering into competition with the foreign grower, which they would successfully do if the market were open to them, unless the duties were excessive. You will perceive, therefore, that although we agree with the Planters' Convention that the high foreign duties are very injurious to the trade, yet we think that the Regies or monopolies, are far more injurious, for the reasons already given, viz: 1st Because our Planters, by reason of the monopolies, are prevented from entering into competition with foreign growers of Tobacco, either in quality or quantity: And 2ndly. The dealers and growers of Tobacco in this country are deprived of the benefit of an extensive foreign competition in the purchase of this great staple, in our own markets. We have therefore two great objects to be attained by treaty with foreign nations, viz: The reduction of excessive duties, and the abolishment of Regies or monopolies. Now both these great objects might be obtained by strong and earnest representations to foreign governments. Take France for an example, we take her wine, brandy, silk, cotton fabrics, madder, fruit &c. She takes nothing from us, of any great value, but cotton—Tobacco being subjected to the Regies. Her wine and brandy, are certainly no more valuable than our Tobacco; and her silk can be dispensed with or furnished by others who are or will be more liberal in trade. Our country is better suited to the culture of the grape and silkworm than France is to that of tobacco. It is a forced cultivation protected by a monopoly. Would it not be better for France to be supplied with tobacco from us, than to be cut off from supplying us with wine, brandy and fruit, to say nothing of her madder, silk and cotton goods? Would it not be well for the tobacco planters to petition Congress, the next session, to adopt retaliatory measures against European governments, which have, either by excessive duties, Regies or monopolies, one of our great staples to so much embarrassment? If such petitions should come forward from North-Carolina, Virginia, Maryland, Ohio, Kentucky, Tennessee, Missouri and Indiana, might they not induce foreign governments to deal more liberally with us in reference to this important branch of our trade? Would they not at least enable our ministers to treat with them more seriously, and with a better prospect of success? And if the committee of Congress, to whom the subject would be referred, should adopt a politic report, even if it should not be acted on at the next session, foreign governments would regard it with much interest, and no doubt be disposed to adopt some measures of relief.

Another very important subject which we believe was overlooked by the Planters' convention, is the fact that we import cigars and Tobacco to an amount we think fully equal to half the total value of our exports of tobacco. In the single item of cigars, our importations for last year (1836) were to the value of 1,058,857 dollars; of which \$1,043,731, was furnished by Cuba. As Spanish leaf tobacco pays an ad valorem duty, we have no means of ascertaining the value of importations of leaf, but suppose it be of greater value than the cigars. Thus we import annually foreign tobacco to an amount over 2,000,-

000; which is nearly equal to one half the value of our exports of this article. We think nearly, or quite all of this article could be grown in our own country. Seed leaf is considerably grown in Connecticut, and some in Pennsylvania. But these states are not as favorable to its production as states in lower latitudes.

The law of your state, which prohibits the exportation of tobacco, without inspection, to a sister state, is selfish, and is certainly prejudicial to the interest of growers, and consequently to the state. As you say, it gives Baltimore a monopoly, and monopolies are always injurious. Inspection laws are, or should be, made only to prevent frauds, but their tendency never should be to give one class of citizens, or one city, an advantage over others. As the agricultural interest lies at the foundation of all prosperity, it should never be shackled more than is necessary to prevent frauds. At least it should never be made tributary to any other class, or place.

We think, without vanity, we may say, that our house has devoted more attention to the subject of tobacco than any other; and we will rejoice to find our efforts seconded by Planters.—It is with this view we suggest the above.

We will be much obliged if you will give us, at your earliest leisure, the names of all the counties in your State which grow tobacco, and, as early as possible, the average quantity grown in each county. Also the same of Virginia.

Considerable capital is employed in the tobacco trade here, but we do not know of any persons who would be likely to want agents for the purchase of tobacco. We are exclusively a Commission house.

Respectfully yours,

RILEY & VAN AMRINGE.

Pond Mud.

[FROM THE NEW-ENGLAND FARMER.]

The mud from ponds, when they are cleaned out, has always been an object of attention to farmers, so far as regards its collection; but it must be presumed that its different properties, and consequently the most judicious modes of its application to the land, are either but little understood or neglected; for some cart it directly upon the ground and plough it in, either for turnips or for corn-crops; others spread it upon old leys; and many lay it out in thin heaps to dry, after which mix it with lime or dug. Upon this it has been remarked, by an eminent agriculturist, that in reasoning with the farmers upon the cause or principle by which they are guided in those different proceedings, the reply is generally "that it has been their practice to do so—that it has answered very well—and that they know of no better mode of treating it." It may be observed, that ponds, being usually placed at the lower parts of the fields, receive after every hard rain, a part of the soil, as well as of the substances, with which they have been manured. If the ponds be large and deep, they may also acquire much decayed vegetable matter, arising from the aquatic plants with which such pools usually abound; and if near the yards at which cattle are commonly watered, they must likewise receive a portion of their dung; such mud is, therefore, particularly applicable to light soils, both as containing nutritive matter, and adding to the staple and consistency of the land. The most common time of mudding ponds, is during

the summer months, when it is usual to let the slime lie near the edge of the pond, until the water is drained from it. A spot is then marked, either upon a head land of the field upon which it is to be laid, or as near it as possible, of a size to raise a compost with alternate layers of either lime or dung.

If dung can be had, the best mode of preparing this manure, is to lay a foundation of mud, of about a foot or a foot and a half in depth, of an oblong form, and not more than eight feet in width, upon which the freshest yard dung is laid to about double that depth; then a thin layer of mud; after which alternate layers of mud and dung, until the heap be raised to about five or six feet in height—keeping the sides and end square, and coating the whole with mud, at least twice at different periods.

If quick lime be used, and there remains any moisture in the pond scourings, it will be sufficiently fallen for turning, in a few days; but if the compost be made with farm yard dung, it may require to remain six or eight weeks to ferment and decompose, before it is in a proper state for turning. To form them, in the first instance, with both quick lime and manure, is injudicious: the former ought never to be brought in contact with the latter—though manures may be advantageously incorporated with an old compost, in which a little lime has been used. It appears the better mode to apply it in the latter end of autumn, or early part of winter, and to bush-harrow it well after it has been hardened by frost.

Sea mud, or *Sleeck*, has been also used in some places in large quantities, and has been found of so very enriching a nature, as to amply remunerate for carrying it to considerable distance. It is generally laid upon grass in autumn and ploughed in without any addition in the following spring. It is also found that its effects remain longer on the land than marl; and although that which is over marled is spoiled for grass, yet that never happens to sea-mud.—*British Husbandry*.

Culture of Corn.

[FROM THE ZANESVILLE GAZETTE.]

Messrs. Editors.—Believing in the policy of communicating through the public papers, the result of experiments in our several occupations that all may be profited by the experience of each, I wish to communicate through your columns the result of an experiment which I made last year upon a lot of two acres of corn. The land was of uniform quality, being a light sandy loam, which had been in timothy meadow for many years.

The first half-acre I manured by putting a shovel full of sheep manure in each hill—the second, by putting a shovel full of chip manure to each hill—on the third, I used a shovel full of manure from the barn yard, or rather a mixture of fine manure and earth, obtained by ploughing the yard after removing the long manure—on the fourth I used the same quantity of stone coal ashes, being a mixture of well rotted and fresh ashes.

The corn was dropped carefully upon the manure, and throughout the whole lot, pumpkin seed were dropped with the corn. On the part manured from the sheep-yard, not a stalk of corn made its appear-

ance, though the pumpkins grew well; and indeed, in the pumpkin crop, there was little difference; it was fine throughout. Between the produce of the portions on which chip-yard and barn yard manure had been used, there was no observable difference, both was a good yield, say 50 bushels per acre; but the yield on the part manured with coal ashes, was at least, at the rate of 100 bushels per acre. No accurate measurement was made, but the relative quantities were readily ascertained.

The above are the facts of the case, and I should be pleased to hear the views and experience of some of my fellow farmers; for if coal ashes is really so valuable as a manure, it is time that the farmers of Muskingum should know it. I have tried coal slack on clover and found it to answer a valuable purpose. I should like to have an essay on the nature of coal ashes as well as on the above experiment generally, by the editor of the Genesee Farmer.

A MUSKINGUM FARMER.

April 2d, 1837.

On the General Principles of Rearing, Managing, and Feeding Domestic Animals.

[FROM THE AGRICULTURAL MEMOIRS.]

Immediately after the birth of every animal, even of such as are domesticated, the rudiments of its education, as well as its bodily nourishment, are necessarily given by the mother. For this purpose the latter should, during her pregnancy, have been daily protected against all extremes of temperature, well provided with shade and shelter, and abundantly supplied with food and water. When the period of gestation arrives, she should, in general also be separated from the rest of the flock or herd, and by whatever means the case may demand, kept comfortable and tranquil.

After the birth, the first interference on the part of man should be that of supplying the mother with food of a light and delicate quality, compared with that which she had been in the habit of using, and also of administering the same description of food to the offspring, so far as it may by its nature be able to use it. The gentlest treatment should accompany these operations; and the opportunity taken of familiarizing both parent and offspring with man by gently caressing them, or at least, by familiar treatment on the part of the attendant.

As the animals increase in size and strength, they should have abundance of air, exercise and food, according to their nature, and whatever is attempted by man in the way of taming and teaching should be conducted on mild and conciliating principles, rather than on those of harshness and compulsion. Caresses or familiar treatment, should generally be accompanied by small supplies of food, at least, at first, as an inducement to render the animal submissive to them; afterwards habit will even in the inferior creation, render the familiarities of man agreeable to them for their own sake; but even then to keep up this feeling, small portions of select food should frequently be employed as a reward. By contrasting this method with that of taming or teaching animals by fear or compulsion, the advantages of the former mode will be evident.

Interest is the grand mover of animals, as well as man. In taming by fear, all the interest which the animal has, is the avoiding an evil; in taming by caresses and food, it is the attainment of enjoyment. The most extraordinary results are recorded, as having been obtained by the mild mode, with almost every species of animal on which it has been tried; to this may be advantageously joined, in the more powerful animals, hunger and fatigue. "The breeder Bakewell," Surgeon Hunt informs us, "at an advanced period of life, not only conquered a vicious restive horse, but without the assistance of either grooms or jockies, taught this horse to obey his verbal orders with as great attention as the most accomplished animal that was ever educated at Astley's school. Bakewell was accustomed to say, that his horse could do every thing but speak. The method which he took to conquer this vicious animal was never told, even to his own domestics. He ordered his own saddle and bridle to be put on the horse which at that time was thought to be ungovernable, when he was prepared for a journey of two or three hundred miles; and that no one might be witness to the contest, he led the horse till he was beyond the reach of observation; how far he walked, or in what manner this great business was accomplished was never known; but when he returned from his journey, the horse was as gentle as a lamb, and would obey his master's verbal orders on all occasions. When, what are called irrational animals, are taught such strict obedience to the command of a superior order, it is in general supposed to be the effect of fear; but Bakewell never made use of whip or spur. When on horseback, he had a strong walking stick in his hand, which he made the most use of when on foot; he always rode with a slack rein, which he frequently let lie upon the horse's, neck and so great was his objection to spurs, that he never wore them. It was his opinion that all such animals might be conquered by gentleness; and such was his knowledge of animal nature, that he seldom failed in his opinion, whether his attention was directed to the body or the mind.

To the Intelligent Friends of the Union.

[FROM THE NEW-YORK FARMER.]

The great prosperity to be derived from the cultivation of a single species of Exotic Plants, *was* shown by the old Southern States, in cotton; is exhibited by Louisiana, in Sugar; and may soon be felt, in some other staple, by the whole confederation. Unlike manufactures, the products of agriculture possess the internal power of rapid reproduction in a wonderful geometrical progression. A single grain, of tobacco which, in two years, would furnish only seed enough for a single field, in two years more, will afford a sufficient supply to plant a hundred thousand fields! One Cochincal insect alone, whose progeny, in one year, would occupy the leisure of only one rural labourer, in one year more will give abundant employment to the leisure of one million of rural labourers. In a limited time and space, this extraordinary multiplication is as certain in practice as it is astonishing in calculation; and hence the delay or advance of a single year in forming a *nursery of supply* for cultivators, must be of incalculable importance to an agricultural community. The introduction of valuable vegetables to the industry of the South, is a sure and

speedy remedy for its existing distress. Its large capital and fertile soils may still be devoted to the production of the short fibres of the dry pods of its annual *Gossypiums*, while its small capitals and sterile districts may be transferred to the cultivation of the long fibres of the fresh leaves of the perennial *Agaves*; and the resulting *Henequen* and *Pita*, as superior substitutes for the Hemp and Flax of northern climates, will become harmonious associates with Cotton, its ancient and principal staple. With the fibres of one exotic vegetable our Southern States have hitherto furnished a material for the clothing of a great proportion of the human race; and with the fibres of other exotic vegetables, they may hereafter supply the materials for thread, twine, and cordage, cambric and canvass, and diversified manufactures, to a great majority of the civilized world.

Besides the foreign plants, which are principally valuable on account of the quantity or quality of their fibres, there are thousands whose varied productions are still more profitable in proportion to the capital employed, which may be transferred from South America, Africa, and Asia, to our southern shores; and once within the range of American enterprise, industry, intelligence, and ingenuity will become converted into mines of vegetable wealth, of which their barbarous native countries have never even dreamed. By the cultivation of the *Cactus Cochinitifer* alone, the labor of nearly the feeble in sex or age, at the South, may divert from Mexico its millions of monopoly in *Cochineal*.

The foregoing considerations demand the *immediate* establishment of a Nursery of Tropical Plants at or near Cape Florida.

The climate of the Northern and Southern halves of the Peninsula of Florida, are different in kind or distinct in character. Above 28° it possesses the *improved* climate of our Southern States, and below that parallel it enjoys the *improved* climate of the West Indies. St. Augustine resembles Charleston and New Orleans, in the humidity of its winter and the transitions of its temperature. Cape Florida resembles Matanzas and Campeche, in the dryness of its winter and the uniformity of its temperature. The Southern half of Florida has also the perpetual trade wind, the daily sea and nightly land breeze, and the rainy summer of the Islands of Cuba, Hayti, Jamaica, and Puerto Rico, and of the whole Peninsula of Yucatan. Hence it combines all the phenomena of a tropical climate, viz., a constant aerial current to the west; an alternate land and sea breeze; a delicious dry, and a refreshing wet season; and a great uniformity of temperature throughout the year. But Tropical Florida, as it may now be called, must be blessed with a still greater equality of temperature than either the Islands of the West Indies or the Peninsula of Yucatan. It has not the *elevated* mountains of the former to chill and charge its atmosphere with thunder, lightning, storm, and rain: it has not even the *wide* surface of the latter to cool the air so greatly by night or to heat it as greatly by day. But, above all, its happy equilibrium must be sustained by a friend peculiarly its own—the great Gulf Stream, which cherishes the shores it embraces with the heat which it brings from the Equatorial seas. The perpetual trade wind, in its passage across this warm river of the ocean, imbibes its equalizing temperature, and steadily distributes it, int raveling westwardly, over the whole surface of tropical Florida.

The whole extent, then, of Southern Florida must present unparalleled advantages for vegetable cultivation and for animal enjoyment.

By analogy with Yucatan, its atmosphere should become proverbial for healthiness. Consumption, which annually destroys fifteen per cent. of the population between Boston and New Orleans, should at least be as rare a disease as it is in Campeche, where it is shunned as a virulent contagion; and the thousands of sufferers, who are sent in its incipient stages to perish amid the sudden transitions of the south of Europe, may hereafter change their voyage to recover in the equable temperature of the south of Florida.

The eastern shore, however, possesses some advantages for a settlement which are not common to the western side. The trade wind arrives at it with the steady warmth of the Gulf Stream, and the pure freshness of the ocean, which may be somewhat disturbed in its course across the interior by the variations and exhalations of the soil; and vessels bound to it will not be exposed to that delay in time, or those dangers in navigation, which necessarily attend a voyage round Cape Sable. But especially in reference to the location of the first Nursery in Florida, the circumstance most essential to its success, will be found in speed and safety of communication with the great commercial emporium of the north; as ninety-ninths of the valuable exotics of the world can be obtained more easily and cheaply, via New-York, than in any other way.

You are respectfully referred to Document, No. 198, and report, No. 454 of the last Session of Congress, containing a letter from the Secretary of the Treasury, and a Report from the committee on Agriculture, for an outline of the past services and future plans of the Subscriber, to accomplish the important enterprise of domesticating tropical plants in the United States. You will thence perceive that his hopes of ultimate success are founded on an act of the Legislative Council of Florida, incorporating, restrictively, a Tropical Plant Company, and on a Bill of the National House of Representatives, granting, conditionally, a Township of Land; and that, consequently, if the Company should finally be organized, and the Bill become a law, one or two years must subsequently elapse before any available funds can probably be obtained from either measure, or both combined. Nevertheless, during the ensuing winter and spring, the subscriber shall be employed in collecting the valuable vegetables of Yucatan and Tabasco, with the *hope* of transplanting them in Florida about the beginning of the periodical rains in May, and of thus commencing a permanent depot for the continued reception of superior species of all celebrated plants of the Torrid Zone. To realize this hope, an intervening accumulation of funds is essential for the transportation of a cargo of living plants, for the preparation of the soil to contain them, and from the maintenance of a family to attend them in the unsettled vicinity of Cape Florida. This obstacle once overcome, he will ensure the rapid growth of a systematic garden of improved exotics, in which scientific arrangement and even picturesque beauty shall be blended with *practical utility*—the grand end and aim of his persevering ambition. Believing, then, that the astonishing importance of a single year, in the geometrical progression of a *Distributing Nursery*, will justify the trial of every honorable means to hasten the period of its formation, this hurried address is therefore, respectfully submitted to the patriotic friends of the *speedy domestication of Tropical Plants*, with the humble expectation that it may excite a *Subscription Loan* for that purpose. The Hon. J. M. White, the Delegate from Florida, in Congress, at Washington City, will take charge of

all sums that may be thus advanced towards the contemplated Nursery, and will return a receipt for the same to each subscriber, which will entitle him to an equivalent in plants or stock.

HENRY PERRINE,
Consul, U. S. A., at Campeche.

October 4, 1832.

Vegetable Irritability.

[FROM THE MAINE FARMER.]

Every one acknowledges that there is such a state or condition in vegetables known by the name of vegetable life, but there has been doubts among many whether there is actually what is known by the term of life, in vegetables; or a living principle acting independently upon the elements which constitute the body of vegetables, or whether the appearances are not owing to the mechanical action of fluids, &c. upon the system of plants.

Numerous experiments, however, have shown, pretty conclusively, that there is such a thing or agent as vegetable life, or perhaps it may more properly be called vegetable irritability. A very simple experiment brought forward by Dr. Johnson, of England, may illustrate this principle.

If you take the stalk of many plants, such as the nettle or dandelion, cut it off and split it down a little way, the divided parts will instantly spread apart—separating from each other. Now to what is this owing? It cannot be because the parts are weakened, for if you invert them they still keep their position. It cannot be on account of elasticity, for many, and indeed we may say all of the plants which will exhibit this appearance when green, will not show it when they are dry and much more elastic than when growing. Dr. Johnson found that poisons destroyed this power of diverging or separating. Now if it depended upon mere elasticity, or weakness of the parts, this could not be the case.

A stem of a plant called *Bryony*, which would exhibit this property well when green, was put into a solution of arsenite of potash. In two days it became flaccid, and this power was wholly destroyed.

He also put a nettle into a jar of Sulphuretted Hydrogen. The plant became weakened, and the divergent power completely destroyed.

On the other hand, many substances increase this action. You have undoubtedly seen children split the stem of a dandelion, and by putting it into their mouths, it would become curled up in rings or circles. Cold water will do the same—spirit and water, &c. If, therefore, poisonous substances will destroy this action, and some stimulants increase it, the inference is fair that it depends upon vital action, and it must be analagous to the irritability or contractile power of the animal frame. If this be the case, and animal life and vegetable life, in its feeblest states, are so nearly analagous, may not the same amount of sensation attend the same amount of life in one as well as the other?

PART III.

MISCELLANEOUS INTELLIGENCE.

Corn Bread.—The South has been long celebrated for its grateful corn bread, cakes, muffins and homminy. In consequence of an invitation in the Albany Cultivator, a young lady in Tennessee, has kindly sent the following directions for making these domestic delicacies of the table:

Plain Corn Bread.—Six pints of meal, one table-spoonful salt, four pints water; thoroughly mixed with the hand, and baked in oblong rolls, about two inches thick. Use as much dough for each roll as can be conveniently shaped in the hand. Many persons use hot water; in winter it is certainly best. The bread is better to be made half an hour or more before it is baked. The oven must be tolerably hot when the dough is put in. All kinds of corn bread require a hotter oven, and to be baked quicker than flour.

Light Corn Bread.—Stir four pints meal into three pints tepid water; add one large teaspoonful salt; let it rise five or six hours; then stir it up with the hand, and bake in a brisk oven. Another method is to make mush, and before it grows cold, stir in half a pint of meal. Let it rise, and bake as the first.

Corn Cakes.—Six eggs well beaten, one pint milk, one teaspoonful salt, two pints mush almost cold, two pints meal, and three table-spoonsful melted lard.—Grease the oven, put one large spoonful of butter in each cake. Do not let them touch in baking.

Corn Muffins.—Made in the same way as corn cakes; grease the muffin hoops, and heat the oven slightly, before putting in either corn cakes or muffins. A better muffin is made by substituting two pints of flour instead of meal.

Batter or Mush Cakes.—Beat the yolk of eggs very light, add one pint milk, two pints mush almost cold, one and a half pints flour, one teaspoonful salt, three table-spoonsful melted butter—to be well beaten together. Just before frying them, whip the whites to a strong froth, and stir it lightly into the batter. For frying all kinds of batter cakes, use no more lard than is necessary to make them turn well.

Mush.—Put two pints of water into a pot to boil; then take one pint cold water and mix smoothly into it one pint meal. When the water in the pot boils, stir this well into it, and let it boil ten or fifteen minutes, or until it looks clear.

Common Batter Cakes.—Six eggs well beaten, two and a half pints milk, one teaspoonful salt, stir in three pints of meal, that has been thrice sifted through a common sifter. Keep the batter well stirred while frying, otherwise the meal will settle at the bottom.

Rhubarb.—One of the many plants which a farmer may have in his garden, and which may be made to contribute to the delicacies of his table, and to the health and comfort of his family, with very little expense or labor. The plant is perennial and resembles much in its habits, the burdock, though the leaves and their stalks may be somewhat larger in a good soil. A dozen plants will serve to supply a family. The leaf stalks are the parts used. The skin or cuticle is peeled off; they are cut into quarter or half inch pieces, and used without further preparation, with sugar and spices, like unripe gooseberries, for pies and tarts, which fruit it very much resembles in flavor. It may be used in the spring, and till mid-summer. Medical men ascribe to it a salutary influence on health, particularly to children, when used in this way. The seed ripens about mid-summer, at which time it may be sown.

This plant may be raised from seed, or by dividing the roots.

To make Fire and Water proof Cement.—To half a pint of vinegar add the same quantity of milk; separate the curd, and mix the whey with the white of

five eggs; beat it well together, and sift into it a sufficient quantity of quick lime to convert it to the consistency of a thick paste. Broken vessels mended with this cement, never afterwards separate, for it resists the action both of fire and water.

Effect of Climate and Cultivation on Vegetables.—The *myrtle tree*, which, with us is a small shrub, grows in Van Dieman's Land to the height of 200 feet, and has a trunk from 30 to 40 feet in circumference. The wood resembles cedar.—The Chinese have an art by which they are able to produce miniature pines, bearing a perfect resemblance to the gigantic specimens of our country, and only five or six inches high.

To Perfume Linen.—Rose leaves dried in the shade, cloves beat to a powder, and mace scraped; mix them together, and put the composition into little bags.

Cure for the Fistula.—As your useful paper is made much more so by publishing any useful discovery, or valuable information, without pretence to either, I send you the following result of my experience, which you are at liberty to publish if you think it worth an insertion.

A few years since I had a fine horse about six years old, that I had purchased in the south part of Ohio shortly before. From an injury from his collar or some other cause, a large tumor arose on his withers, that shortly after proved to be a fistula. I tried various remedies said to be specifics, all to no good purpose. Having had no little experience of the action of arsenic upon the human body in similar cases, I was thereby induced to try it upon my horse. Accordingly I took a small piece of cloth, wet it and rolled it over and over in dry arsenic, and in the shape of a small roll, thrust it to the bottom end of the tube and secured it there about ten hours. At the end of the time, finding the tube detached from the animal except a little at the bottom, I then separated it from the horse with a sharp knife. It healed readily and has showed no disposition to return since.

I have much faith in the use of arsenic for one or more applications in similar diseases. Let those who wish try it, then say what they think of it.

The arsenic acting as a caustic, destroys the vitality of the parts in contact with it.—SPECTATOR.—*Genesee Farmer.*

Importations of Bread.—Few men in the community, and especially practical farmers, are aware of the effect which the late importation of bread stuffs has had upon our national character and credit. The farmer who is dependent upon his neighbor for the ordinary agricultural products of the climate in which he lives is not considered entitled to very large or long credit;—and it is precisely so with a country who are dependent on other nations for the staff of life. Not long since the Rothschilds were invited to make sundry investments in the United States, but declined, offering as a reason that they did not think much of a country that imports its bread.—*Silk Cult.*

Celebrated Eye-Water.—Mr. Tucker—John Morgan, formerly of Lima, obtained the following receipt for an eye-water, from a German Physician, which he made and vended for many years with celebrity. When he was about to retire to Michigan, he gave the recipe to a friend and swore him to keep it a secret. Afterwards a neighbor found it lying on the table, and copied it, and is now freely giving it to his friends. To aid him in his philanthropy, I send you a copy for publication in the *Genesee Farmer*.

One ounce Sulphate of Iron, or Copperas.

Half ounce Sulphate of Zinc, or White Vitriol.

One pint of soft water.

Pains should be taken to obtain the ingredients pure, and to filter the solution through filtering paper, or several thicknesses of cloth, in order to further purify and free it from the feruginous coloring matter of the copperas.

Fishing with Buck Eye.—It may be already known to some of our readers but it was new to us, to learn that the shrub called Buck-Eye was fatal to the fish of our Rivers and Creeks. Peter Dick says he and Dr. J. M. Worth tried the experiment very successfully a few days ago, in a little pool of water, on the Doctor's plantation of Montgomery County. The only preparation consisted of a Basket part full of the leaves, roots and balls of the Buck-Eye, beat and bruised up together and then dipped a few times into the water;—when instantly the fish, big and little, began to throw themselves simultaneously on the shore. This pool, of not more than 3 or 4 rods surface, not far distant from a creek; but there did not

appear to have been any connexion between them, even in times of high water. In this way they caught 230 fish in a few minutes. And some hundreds more of the smaller order lay round the margin of the pool. The fish were so stupified that they made no resistance in being caught in the hand.—*Ashboro' (N. C.) Citizen.*

Preventing Milk from becoming Sour.—We mention the following fact more for the purpose of calling the attention of our readers to the subject, and inducing them to try experiments, than with a belief that the single experiment related will be of any great importance. Dr. Hare, of Philadelphia, in giving an account in *Silliman's Journal*, of his experiments upon the essential oils, seems to think that the more acrid ones will resist putrefaction better than the mild ones. Among other experiments he states that he found "the essential oil of cloves and cinnamon possessed an antiseptic power quite equal to that of Kreosote."

"On the 2d day of July he added two drops of oil of cinnamon to an ounce or more of fresh milk, it remained liquid on the 11th, and, though it finally coagulated, it continued free from bad taste or smell till September, although other portions of the same milk had become putrid." Now it may be possible that two drops to the ounce of milk may render it a little too spicy for common purposes; but this fact may lead to the discovery of some substance that may be added, and while it does not injure the taste or qualities of the milk, preserve it a long time from becoming sour or from putrifying. Such a thing would be a great convenience to many families, especially those who are in the habit of purchasing their milk and do not wish it to become sour immediately.

Fever and Ague.—A strong decoction of white ash bark, drank plentifully, on the first symptoms of fever and ague, will generally have the effect of arresting the disease. We have for two seasons tried it with decided success, and have witnessed its beneficial effects on others. The remedy may not be infallible, but it is worth trying.—*Jamaica Farmer.*

Dandelion Beer.—Some economical housewife at Concord Ms., according to the Yeoman, and the editor has been permitted to drink thereof and vouches for its excellence, has discovered that a pleasant table beer may be made of the water in which dandelions have been boiled, by adding to each gallon a tea-cup full of yeast, and a pint of molasses. As dandelions are abundant and cheap, and their medicinal qualities well known, the experiment may be worth trying.—*Boston Trans.*

Virtues of Lime.—The usual application in India to a fresh wound, is that of slacked lime.—A late traveller in that country, who sojourned some time among the natives of the interior, says:—

"A Mussulman, who was in our employ, was breaking wood, the head of the hatchet came off, and the sharp edge fell with considerable force on the poor creature's foot; he bled profusely and fainted: lime was unsparingly applied to the wound, the foot was carefully wrapped up, and the man conveyed to his hut on a charpoy (bedstead) where he was kept quiet without disturbing the wound; at the end of a fortnight he walked about, and in another week returned to his labor. Lime is an article of great service in the domestic economy of the natives. I have experienced the good effects of this simple remedy for burns or scalds: equal proportions of lime, water, and any kind of oil, made into thin paste, and immediately applied and repeatedly moistened, will speedily remove the effects of a burn, and if applied later, even when a blister has risen, the remedy never fails; I cannot say how it might act on a wound, the consequence of a neglected burn."—*Franklin Mercury.*

Soap your Seed Corn.—Put your seed corn in soap—let it remain a short time, and stir it until you are sure the soap has reached it all—then roll it in plaster; ashes, sand, or whatever you please, so as to make it convenient to drop, and the wireworm will never injure the product or kernel. Do just try it.—*Maine Farmer.*

Hortus Siccus.—In studying Botany, it is of advantage to prepare a book of dried specimens of plants; such a book is termed *Hortus Siccus*, a dry garden. Choose from a plant a specimen having a flower, and leaf, and if possible a seed. Lay it upon thick blotting paper, placing one or two sheets of the same over it; upon which unless the specimen be very succulent and thick, lay another specimen, and then more paper. Care must be taken to lay the specimen smooth and flat upon the paper; no part of the specimen should be under another part;

cut off any portion that is inconvenient to retain; if any bud or flower be too thick pare off some of the under side to make them lie properly. When they are arranged put a heavy weight upon them,—after a few hours carefully shift the position of each specimen to a dry part of the paper, and replace the weight; repeat this changing of paper, if necessary until the specimen is perfectly dry. Prepare a solution of gum with a little camphor in it, and secure each specimen to a page in a folio of cartridge or white-brown paper; and then write under each the name of the plant, class, order, tree, shrub, herb, country &c. In the case of any specimen being full of sap, a hot iron may be passed two or three times over the paper—taking care not to burn it.—*Hor. Cabinet.*

To give Lusture to Silver.—Dissolve a quantity of alum in water, so as to make a pretty strong brine, which must be skimmed very carefully; add some whitening to it, and when you wish to use it, dip a piece of linen rag in it, and rub over the plate.—*Yankee Farmer.*

Potatoes.—In Prussia the Potato is cultivated with peculiar success;— as the stalk grows, the earth is heaped up, leaving only three leaves at the top; roots are thus greatly increased, and the produce is said to be astonishing.

Topless Potatoes.—We were, the other day, shewn a curious specimen of new potatoes, that were grown without any top, or leaves. About five weeks ago, Mr. J. H. Hill, of Waterville, planted some potatoes of the common kind in the usual way. One or two hills did not come up, and he last week dug down to them and found that the potato which he had planted, and which was a whole one, had put out several tubers.

Two of them were as large as a pigeon's egg, each; and there were several smaller ones beginning to show themselves. There was not a sign of any top or leaves to be seen. He found another hill in which the same process was going on.

We do not recollect of having seen an instance of the kind. The growth of the new tubers must have been quite rapid, having grown out and formed to the size above mentioned in five weeks, of not very warm weather. The question suggests itself—how long and how large will they grow without any stalk or leaf to prepare sap for their nourishment? and also, will they continue to grow after the parent potato becomes decayed? and if so, from whence comes the nutriment that gives their increase?

The potato that was planted is sound and hard yet.

Sow Turnips among Corn.—A great many turnips may be raised among corn at a small expense. A farmer sowed a small quantity of English turnip seed on an acre of corn ground last summer before hoeing the second time, which was about the first of July, and he raised about eighty bushels of fine turnips. We noticed these turnips several times as they were growing, and we do not think that the corn was injured to the value of fifty cents by the turnips; for they were scattering but large, and shaded but very little. The cost of raising the turnips was not more than fifty cents. When the season is not very favorable for corn so that it will not grow large, a good crop of turnips may be obtained on the same ground, and if the corn grow rank and shade much, so as to prevent the turnips from growing, the turnips will do no injury of consequence as they will be too scattering and small to shade the ground; and in most seasons the corn will have attained its growth and begin to ripen before the turnips are large enough to shade to a great extent, and after the corn stalks are cut or the corn cut up and shocked, which is much practiced of late years, the turnips having got started mostly in the shade, will have the benefit of the sun, and grow rapidly. Turnips should be sown earlier than usual when sown among corn, as they grow more slowly the first of the season, while shaded.—*Yankee Farmer.*